Striving Readers Study:

Targeted & Whole-School Interventions – Year 2

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Table of Contents

Chapter				Page
Acknowledgements				xiii
Executive Summary of Findings: Year 2 Implementation and Impact				xv
	A.	Project Overview		xv
	B.	Targeted Intervention		xv
		B.1	Summary of the Targeted Intervention Implementation Findings	xvii
			B.1.1 Training	xvii
			B.1.2 Class Size	xviii
			B.1.3 Ongoing Student Assessment	xviii
			B.1.4 Instructional Software	xviii
			B.1.5 Targeted Implementation Summary	xix
		B.2	Summary of the Targeted Intervention Impact Findings	xix
	C.	Whole-School Intervention		xxi
I.	Introduction and Study Background			1
	I.A	District Overview		1
	I.B	Description of the Intervention Models		2
		I.B.1	Targeted Intervention	2
			I.B.1.1 Professional Development Model	4
			I.B.1.2 Participating Schools, Teachers, and Students	6
		I.B.2	Whole-School Intervention	8

Chapter			Page
		I.B.2.1 Professional Development	11
		I.B.2.2 Participating Schools, Teachers, and Students	13
	I.C	Logic Models	14
		I.C.1 Targeted Intervention	14
		I.C.2 Whole-School Intervention	16
	I.D	Brief Overview of Key Evaluation Design Features	18
		I.D.1 Targeted Intervention	18
		I.D.1.1 Targeted Intervention	18
		I.D.1.2 Unit of Random Assignment	19
		I.D.1.3 Key Measures for Student Outcomes	20
		I.D.2 Whole-School Implementation	21
		I.D.2.1 Key Research Questions	21
		I.D.2.2 Unit of Random Assignment	21
		I.D.2.3 Key Measures for Student and Teacher Outcomes	22
II.		Implementation of the Targeted Intervention: Years 1 and 2	27
	II.A	Implementation Study Design	27
	II.B	Implementation Results	27
		II.B.1 Training	28
		II.B.1.1 Teachers	28
		II.B.1.2 Coaches	29
		II.B.1.3 Other Staff	29
		II.B.2 Class size	30
		II.B.3 Ongoing Student Assessment	31
		II.B.4 Instructional Software	32
	II.C	Barriers to Targeted Implementation	34
	II.D	Year 1 to Year 2 Implementation	35

Chapter			Page
III.	Impacts of the Targeted Intervention: Years 1 and 2		37
	III.A	Study Design and Analytic Approach	37
		III.A.1 Sampling plan	37
		III.A.1.1 Power	37
		III.A.1.2 School Eligibility, Randomization, and Sample Size	38
		III.A.1.3 Student Eligibility and Sample Size	39
		III.A.2 Description of the Counterfactual in Year 1	41
		III.A.3 Data Collection Plan	43
		III.A.3.1 Student Measures	43
		III.A.3.2 Schedule of Data Collection in Year 2	44
		III.A.4 Summary of Analytic Approach	45
		III.A.4.1 Model Specifications	45
		III.A.4.2 Selection of Analytic Variables	45
		III.A.4.3 Analysis groups	46
		III.A.4.4 Missing Data	47
		III.A.4.5 Subgroup Analyses	47
	III.B	Description of the First and Second Year Samples	49
		III.B.1 Characteristics of Schools and Students	49
		III.B.1.1 Schools	49
		III.B.1.2 Students	49
		III.B.2 Tests of Equivalence for Treatment and Control Schools	51
	III.C	Impacts on Students	52
		III.C.1 Analysis Group 1	53
		III.C.2 Analysis Group 2	55
		III.C.3 Analysis Group 3	58
		III.C.4 Analysis Group 4	60
		III.C.5 Analysis Group 5	63

Chapter			Page
	III.C.6	Impacts on Student Attendance: Additional Analyses	66
	III.C.7	Impacts on Students: New Jersey Assessment of Skills and Knowledge	68
	III.D	Summary and Discussion	70
IV.	Implementation of the Whole School Intervention: Years 1 and 2		75
	IV.A	Implementation Study Design	75
	IV.A.1	Structural Supports	75
	IV.A.1.1	Role of District	75
	IV.A.1.2	Roles of Building Staff	77
	IV.A.1.3	Developers' Roles	77
	IV.A.2	New Jersey City University	77
	IV.A.3	National Urban Alliance	80
	IV.B	Implementation Results	82
	IV.B.1	Whole-school Training Participation	82
	IV.B.1.1	NJCU Year 2 Whole Group Training Participation	85
	IV.B.1.2	NUA Year 2 Whole-Group Training Participation	87
	IV.B.2	In-School Coaching Participation	89
	IV.B.2.1	NJCU In-School Coaching Participation	90
	IV.B.2.2	NUA In-School Coaching Participation	91
	IV.B.2.3	RTC In-School Coaching Participation	93
	IV.B.3	Participation Summary	94
	IV.C	Barriers to Whole-School Implementation Year 2	96

Chapter **Page**

IV.D Year 1 – Year 2 Implementation 98

IV.D.1 NJCU Participation Changes Between Year 1 and Year 2 98

IV.D.2 NUA Participation Changes Between Year 1 and Year 2 99

References 101

Tables

1 Demographic characteristics of participating Striving Readers schools (2006-2007) 7

2 Characteristics of students in the targeted intervention 9

3 Distribution of teachers by subjects taught 13

4 Key measures of student outcomes 21

5 Key measures of teacher and student outcome variables 25

6 Participation categories for teachers: Minimum number of days required for full, adequate, and low participation. 28

7 Number & percentages of teachers by level of participation in professional development, years 1 and 2 28

8 Teacher participation in READ 180 training in year 2 29

9 Number of READ180 RTC visits received by school 30

10 Number & percentages of teachers by level fidelity to class size requirements, years 1 and 2 31

11 Number & percentages of teachers by level fidelity to assessment requirements, years 1 and 2 32

Tables (continued) **Page**

12	Number & percentages of teachers by level fidelity to instructional software guidelines, years 1 and 2	33
13	Year 2 teacher-level summary scores for time on instructional software by criteria	34
14	Illustrative example of the practical significance of a .24 effect	37
15	Blocking data used for random assignment	39
16	Class size comparison, treatment versus control	41
17	Physical environment of classrooms	41
18	Literacy resources used in observed classrooms	42
19	Classroom organization	42
20	Average number of occasions that the following student groupings were observed	43
21	Data collection schedule for year 2	45
22	Covariates for impact analysis	46
23	Analysis groups by year and grade	47
24	Missing data for student outcomes, year 2	48
25	Characteristics of year 2 students in the targeted intervention, by treatment status	51
26	Average days of school missed in year 2.	51
27	Balance test for treatment and control groups—year 1	52
28	Analysis group 1 overall—impact of read 180	53
29	Analysis group 1 Females—Impact of READ 180	54
30	Analysis group 1 Males—Impact of READ 180	54

Tables (continued) **Page**

31	Analysis group 1 African-American—Impact of READ 180	54
32	Analysis group 1 Hispanic—Impact of READ 180	55
33	Analysis group 1 Special Education—Impact of READ 180	55
34	Analysis group 2 Overall—Impact of READ 180	56
35	Analysis group 2 Female—Impact of READ 180	56
36	Analysis group 2 Male—Impact of READ 180	56
37	Analysis group 2 African-American—Impact of READ 180	57
38	Analysis group 2 Hispanic—Impact of READ 180	57
39	Analysis group 2 Special Education—Impact of READ 180	57
40	Analysis group 3 Overall—Impact of READ 180	58
41	Summary of subgroup findings for analysis group 3	59
42	Analysis group 3 Female—Impact of READ 180	59
43	Analysis group 3 Male—Impact of READ 180	59
44	Analysis group 3 African-American—Impact of READ 180	60
45	Analysis group 3 Hispanic—Impact of READ 180	60
46	Analysis group 3 Special Education—Impact of READ 180	60
47	Analysis group 4 Overall—Impact of READ 180	61
48	Summary of subgroup findings for analysis group 4	61
49	Analysis group 4 Female—Impact of READ 180	62
50	Analysis group 4 Male—Impact of READ 180	62

Tables (continued) **Page**

51	Analysis group 4 African-American—Impact of READ 180	62
52	Analysis group 4 Hispanic—Impact of READ 180	63
53	Analysis group 4 Special Education—Impact of READ 180	63
54	Analysis group 5 Overall—Impact of READ 180	63
55	Summary of subgroup findings for analysis group 5	64
56	Analysis group 5 Female—Impact of READ 180	64
57	Analysis group 5 Male—Impact of READ 180	65
58	Analysis group 5 African-American—Impact of READ 180	65
59	Analysis group 5 Hispanic—Impact of READ 180	65
60	Analysis group 5 Special Education—Impact of READ 180	66
61	Analysis group 1—Impact of READ 180 on attendance, outlier school removed	67
62	Analysis group 2—Impact of READ 180 on attendance, outlier school removed	67
63	Analysis group 3—Impact of READ 180 on attendance, outlier school removed	67
64	Analysis group 4—Impact of READ 180 on attendance, outlier school removed	68
65	Analysis group 5—Impact of READ 180 on attendance, outlier school removed	68
66	Correlations between SAT 10 subscales and NJASK- 6th grade scores	69
67	Correlations between SAT 10 subscales and NJASK- 7th grade scores	69

Tables (continued) **Page**

68	Analysis groups 1, 2, and 3 – Impact of READ 180 on NJASK LAL	70
69	Reasons students did not receive READ 180 in year 2	70
70	Summary of analysis findings by subgroups	73
71	Year 1and 2 ratings by school on teacher participation in whole-group professional development	84
72	Participation categories for NJCU group training in year 2	85
73	Number and percentage of NJCU-eligible teachers by level of participation in year 2	85
74	Number and percentage of teachers in each school by participation category: NJCU, year 2	86
75	Participation categories for NUA group training in year 2	87
76	Number and percentage of NUA-eligible teachers by level of participation in year 2	87
77	Number and percentage of teachers in each school by participation category: NUA, year 2	88
78	Years 1 and 2 ratings by school on receipt of in-school teacher support	89
79	Number of coaching visits received by school and resulting coaching score: NJCU, year 2	91
80	Number of coaching visits received by school and resulting coaching score: NUA, year 2	92
81	Average number of NUA coaching hours received by school in year 2	93
82	Number of RTC coaching visits received by school in year 2	94

Tables (continued)

		Page
83	School-level summary scores for participation in whole-school intervention in year 2	95
84	Teacher turnover from year 1 to year 2	97
85	Principal turnover from year 1 to year 2.	97

Figures

1	READ 180 instructional model	2
2	Targeted intervention logic model	15
3	Whole school intervention logic model	17
4	Language Arts Scale Score Frequency Distribution for 19 Evaluation Schools	40
5	Flow of students in the targeted intervention	50

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Executive Summary of Findings: Year 2 Implementation and Impact

A. Project Overview

This report summarizes the results of the Newark, New Jersey, Striving Readers program for project years 1 and 2. The Striving Readers Grant addresses the unmet needs of middle school students reading 2 or more years below grade level and provides professional development for teachers in all core content areas to help them learn about and use more effective literacy strategies. Nineteen middle schools in Newark, New Jersey, are participating in the United States Department of Education Striving Readers study. Two components of the project are being evaluated: a targeted intervention and a whole-school intervention.

B. Targeted Intervention

Scholastic's READ 180 Enterprise Edition was chosen to be the targeted intervention and replaced the core language arts curriculum for targeted students in the treatment schools. READ 180 directly addresses the individual needs of adolescents reading below grade level through adaptive and instructional software, high-interest literature, and direct instruction. Teachers received training on all aspects of the READ 180 curriculum, from preparation to implementation and evaluation. In addition, teachers received training on using student data for differentiated instruction and instruction on interpreting READ 180 data reports.

Description of Schools and Students in Targeted Intervention

The schools eligible to participate in the Striving Readers program were randomly assigned to either the intervention or a control condition in May 2006. No classroom- or student-level random assignment was involved. Eligible middle schools were identified based on the following criteria. They had to:

- Be Title I eligible;
- Serve a minimum of two grades (from 6, 7, 8);

- Not already be using READ 180;
- Be categorized as "in need of improvement" under *No Child Left Behind;* and
- Serve a minimum of 25 eligible students.

These criteria ultimately resulted in a pool of 19 schools for randomization. Ten schools were assigned to the treatment group.

Students were identified as eligible based on their score on the reading subtest of the New Jersey Assessment of Skills and Knowledge (NJASK).

In year 2, a total of 1,232 students participated in the intervention; either in the treatment or in the control group. Of the 1,232 students, 648 attended treatment schools, and 584 attended control schools. Table B-1 shows the distribution of these students by select demographics and by treatment group.

Table B-1. Characteristics of students in the targeted intervention

Number (column %)	Students in treatment schools	Students in control schools	All targeted students
Total number of students	648 (53%)	584 (47%)	1,232
Average no. of students per school	64.8	64.9	64.8
Grade			
6th grade	226 (35%)	179 (31%)	405 (33%)
7th grade	233 (36%)	217 (37%)	450 (36%)
8th grade	189 (29%)	188 (32%)	377 (31%)
Gender			
Male	361 (56%)	300 (51%)	661 (54%)
Female	287 (44%)	284 (49%)	571 (46%)
Economically disadvantaged	385 (59%)	335 (57%)	720 (58%)
Limited English proficient	54 (8%)	41 (7%)	95 (8%)
Special education	287 (44%)	236 (40%)	523 (42%)
Race/ethnicity			
African-American	367 (57%)	315 (54%)	682 (55%)
Hispanic	268 (41%)	257 (44%)	525 (43%)
White	4 (1%)	9 (1%)	13 (1%)
Other	9 (1%)	3 (1%)	12 (1%)

B.1 Summary of the Targeted Intervention Implementation Findings

To determine the degree of fidelity to READ 180, multiple components were evaluated for each READ 180 teacher. These components are: Training, class size, ongoing student assessments, and instructional software.

B.1.1 Training

READ 180 teachers received 2 days (8 hours) of whole-group training from Scholastic covering all aspects of the curriculum, from preparation to implementation and evaluation. In year 1, a full 56 percent of teachers received the full complement of Scholastic's training in the curriculum, whereas in year 2 the percentage dropped to 8 percent.

In both year 1 and year 2, the literacy coaches from the treatment schools were invited to attend the same training sessions as the teachers. In year 1, some 20 percent of the coaches received training in the READ 180 curriculum. In year 2, none of the coaches attended the summer training due to a scheduling conflict. In year 1, all of the school principals attended the READ 180 training and all technology coordinators attended their READ 180 technical training session. In year 2, half of the principals attended READ 180's training, but all technology coordinators attended their READ 180 technical training session.

In addition to the training described above, READ 180 teachers received ongoing classroom support provided by district resource teacher coordinators (RTCs) and Scholastic consultants. The RTCs are tasked with providing support to teachers for both the whole-school intervention and the targeted intervention on an as-needed basis. RTCs visit all READ 180 classrooms, conduct needs assessments, provide demonstration lessons, in-class support and coaching; assist with instructional plans; conduct READ 180 articulation meetings; and serve as liaisons with the district administration. In year 2, treatment schools received 19.4 visits, ranging from 7 to 38 visits.

B.1.2 Class Size

Scholastic's READ 180 materials indicate that no more than 21 students should be enrolled in a READ 180 classroom. In year 1, class sizes for 74 percent of teachers were within Scholastic guidelines. In year 2, all teachers had class sizes of 21 students or less.

B.1.3 Ongoing Student Assessment

Scholastic's assessment tool allows teachers to monitor progress in student reading comprehension. Scholastic recommends a minimum of three assessments per year. The vast majority of teachers (91 percent) met this benchmark for 75 percent of their students or more during year 1. In year 2, all teachers assessed more than 75 percent of their students at least three times during the school year.

B.1.4 Instructional Software

Part of the READ 180 instructional model consists of a 60-minute segment in which students break into three small groups that rotate among three stations: small group instruction, independent reading, and direct instruction (computers). Administrative data were analyzed on the computer rotation.

Scholastic recommends that students use the software a minimum of three times a week and 15 minutes per session.[1] In year 1, some 65 percent of teachers ensured that more than half of their students had adequate levels of exposure to the instructional software. In year 2, the percentage fell to 9 percent. Although the vast majority of teachers adhered to the recommended 15-minute length of session, fidelity to a minimum of three sessions per week was a challenge. Resource teacher coordinators have noted instances where students were not logging off of the computer properly, which may have led to an underestimate in software usage.

[1] Scholastic states that "to receive the full benefits of READ 180, your students should use the topic software at least 15 minutes a day" Scholastic *READ 180 Enterprise Edition Placement, Assessment, and Reporting Guide* (p. 81)

B.1.5 Targeted Implementation Summary

Table B-2 provides a summary of year 1 and year 2 findings of the targeted implementation findings.

Table B-2. Summary of Targeted implementation findings

Targeted Training (% of teachers receiving full dose of READ 180 training)		Class Size (% of Teachers with class sizes meeting READ 180 Guidelines)		Ongoing Student Assessment (% of teachers meeting READ 180 SRI guidelines)		Instructional Software Use (% of teachers ensuring half of students received READ 180 software use requirements)	
Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
56	8	74	100	91	100	65	9

B.2 Summary of the Targeted Intervention Impact Findings

Based on analyses from the first 2 years of Striving Readers data, READ 180 did not have an overall significant impact, but effects were observed for certain subgroups of students. Overall, students in treatment schools exhibited the same level of achievement as students in control schools, across all analysis groups, whether they had 1 or 2 years of exposure to READ 180.[2] This was true of all three subtests; Vocabulary, Comprehension, and Language Arts. Additionally, READ 180 did not have an overall significant impact on students' attendance.

There are some important factors to consider, however, when interpreting these results. From year 1 to year 2 a large percentage of students (25 percent) did not receive READ 180 instruction. This is partly because these students transferred to other schools, although some students who were in treatment schools and supposed to receive READ 180 did not receive it.

In addition, records indicate that for Year 2 over 80 percent of teachers (81.8%) had students who did not have adequate exposure to the full READ 180 instructional software components (students using the software a minimum of three times a week and 15 minutes per session). The low level of fidelity in this area implies that although students were in READ180 classrooms, they did not

[2] Students were divided into five analysis groups in order to examine the overall impact of 1 and 2 years of treatment. The first analytic group included all students who received 1 year of treatment. The second group included only 6th grade students who received 1 year of treatment. The third and fourth groups included the 7th and 8th grade students separately who could have received up to 2 years of treatment. The final group consisted of the combined 7th and 8th grade students.

receive the full amount of exposure to the software, thus potentially leading to null findings. Teachers' level of training with READ 180 may also be a factor because just over half (56.5 percent) of the teachers received the full READ 180 training. The remaining 43.5 percent had either adequate or low levels of participation in the training. It is possible that these teachers were not adequately prepared to implement READ 180 instructional software in the classroom.

Subgroup Impact Findings

Despite the lack of overall findings, it is important to consider the significant impacts found in the subgroup analyses.[3] When investigating the subgroups, multiple significant impacts were found, indicating that for certain subgroups, READ 180 had a positive impact on student outcomes.

When examining where READ 180 had an impact, certain subgroups were more affected than others. In particular, in the group of 8th grade students with 2 years of treatment, Hispanic students' Language Arts achievement increased by an effect size of 0.466, a finding that was statistically significant. Hispanic students (8th graders) in the treatment group who had exposure to 2 years of READ 180 scored 0.446 standard deviations higher than Hispanic students in the control group. Although this was the only finding that was statistically significant, eight other analyses of Hispanic students' achievement had effect sizes greater than 0.20. These effect sizes were found in all subtests of the SAT 10: Vocabulary, Language Arts, and Comprehension. They were found after 1 year of treatment (6th grade combined group) and across all groups with 2 years of treatment.

Another subgroup that appeared to improve as a result of READ 180 was males. Seventh grade males with 2 years of exposure, and the 7th and 8th grade males combined, with 2 years of exposure, scored significantly higher on the Vocabulary subtest and these significant findings had effect sizes of 0.227 and 0.338 respectively.

READ 180 also appeared to be effective for special education students. Special education students with 1 year of treatment scored significantly higher than control students on the Vocabulary section of the SAT 10. In two analyses, 7th graders and 7th and 8th graders combined, who had 2 years of exposure to READ 180, scored significantly higher on the Comprehension subtest. These significant findings had effective sizes greater than 0.20 (0.374 and 0.237 respectively).

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[3] Two aspects of the significance of effects are discussed for each group. The first is whether any of the results are statistically significant at the .05 level. The second is whether any of the results reach an effect size threshold of 0.20.

Although males seemed to be affected by exposure to READ 180, the same results were not always found for females. Females with 1 year of exposure to READ 180 did score significantly higher than control females on Language Arts. However, negative treatment effects were found for females with 2 years of exposure. For female 7th graders with 2 years of READ 180, an effect size of -0.242 on Language Arts was found and for female 8th graders with 2 years of exposure to READ 180, an effect size of -0.224 on Vocabulary was also found. In addition, 8th grade females with 2 years of exposure and 7th and 8th grade females combined, with 2 years of exposure to READ 180, had significantly more absences than females in the control group. See Table B-3 for all subgroup findings.

Table B-3. Summary of analysis findings by subgroups

Analysis groups	Outcomes	Female		Male		African-American		Hispanic		Special Education	
		ES	Sig	ES	Sig	ES	Sig	ES	Sig	ES	Sig
1	Attendance										
	Vocabulary										✓
	Comprehension										
	Language Arts		✓								
2	Attendance										
	Vocabulary										
	Comprehension										
	Language Arts							✓			
3	Attendance										
	Vocabulary			✓	✓			✓		✓	
	Comprehension			✓				✓		✓	✓
	Language Arts	✓*						✓			
4	Attendance		✓*								
	Vocabulary	✓*						✓			
	Comprehension							✓		✓	
	Language Arts			✓				✓	✓		
5	Attendance		✓*								
	Vocabulary			✓	✓			✓			
	Comprehension			✓						✓	✓
	Language Arts							✓			

✓ * denotes negative effects were found during analysis.

C. Whole-School Intervention

The goal of Newark Public Schools' whole-school intervention is to improve students' ability to "read to learn" across multiple content areas. The Whole-School Intervention is thus designed to train teachers to better intergrate the different learning strategies within the district's core literacy program for middle-grade students. To this end, the intervention provides professional development to bolster the literacy knowledge of grades 6, 7, and 8 teachers in whole-group settings and to provide direct coaching support during in-school visits. These professional development and support activities are conducted by experts from New Jersey City University (NJCU) and the National Urban Alliance (NUA). Using a train-the-trainers model, the Resource Teacher Coordinators support the implementation of both professional development approaches through their own whole-group training and site-based demonstration lessons and coaching.

Description of Schools and Students in Whole-School Intervention

The 19 schools participating in the targeted intervention are also the schools participating in the whole-school intervention. However, the whole-school intervention is not being evaluated with a randomized design, and so all eligible teachers in all 19 schools receive the treatment.

In year 2, there were 363 teachers eligible to receive professional development as part of the whole-school intervention. Of these, 147 were eligible for professional development provided by the NUA (teachers who taught only math, science, or social studies). Another 100 teachers were eligible for training from NJCU (teachers who taught only language arts). In addition, 116 teachers were eligible for both NUA and NJCU training. These teachers either taught both language arts and a content area subject (usually social studies), or they taught all subjects (usually special education or bilingual teachers).

Students in all 19 Striving Readers schools, across the 6th, 7th, and 8th grades, were exposed to the whole-school intervention.

Summary of the Whole-School Intervention Implementation Findings

A summary scale for year 2 was developed to describe the picture of connected professional development inputs involved in the whole-school intervention model. Table C-1 provides each school's score for the multiple components of the whole-school intervention professional development—the group training sessions and the in-school coaching visits, for the NUA and the NJCU intervention models. In addition, an overall implementation score and level of implementation are calculated for each school in the study.

Table C-1. School-level summary scores for participation in whole-school intervention in year 2

School	Implementation scores by component					Summary implementation scores
	NUA		NJCU			
	Whole group training	In-school coaching	Whole group training	In-school coaching	Average score	
School 1	4	4	2	4	3.5	Moderate-to-high
School 2	3	4	1	4	3	Moderate-to-high
School 3	1	4	1	4	2.5	Moderate
School 4	3	4	1	4	3	Moderate-to-high
School 5	3	4	1	4	3	Moderate-to-high
School 6	2	4	1	4	2.75	Moderate
School 7	2	4	1	4	2.75	Moderate
School 8	3	4	1	4	3	Moderate-to-high
School 9	2	4	2	4	3	Moderate-to-high
School 10	2	4	1	4	2.75	Moderate
School 11	2	4	1	4	2.75	Moderate
School 12	2	4	2	4	3	Moderate-to-high
School 13	1	4	1	4	2.5	Moderate-to-high
School 14	3	4	2	4	3.25	Moderate-to-high
School 15	1	4	2	4	2.75	Moderate
School 16	4	4	1	4	3.25	Moderate-to-high
School 17	1	4	1	4	2.50	Moderate
School 18	3	4	1	1	2.25	Moderate
School 19	1	4	1	2	2	Moderate
Average	2.26	4.00	1.26	3.74	2.82	Moderate

Although no school achieved full implementation of all four components of professional development in year 2, a total of 53 percent (10 schools) of schools had moderate-to-high levels of implementation for the whole-school intervention. The remaining nine schools all had moderate levels of implementation, taking into account all components of the whole-school professional development.

It should be noted that the relatively high average levels of participation are related more to the high levels of whole-school coaching than to high levels of teacher participation in the group training. Even where teacher participation in the group professional development was poor, the developers (NUA and NJCU) compensated through multiple in-school visits.

Introduction and Study Background I

I.A District Overview

The Newark Public Schools (NPS) system, one of the oldest school systems in New Jersey, dates back to 1676. Barringer High School, in Newark's North Ward, is the third oldest public high school in the Nation. With a student population of 40,500, it is also the largest school district in the State of New Jersey. It serves a diverse student population, with approximately 58 percent African American, 33.5 percent Hispanic, 7.5 percent white, and 1 percent Asian or other heritage. Approximately 10 percent of the students are English language learners (ELL), and 14 percent receive special education services. Analysis of district achievement data reveal that students in the middle grades are struggling in the area of language arts. In spring 2008, only 28.1 percent of 6th graders, 39.9 percent of 7th graders, and 52.2 percent of 8th graders passed the state reading assessment.

The existing literacy curriculum utilizes the New Jersey Core Content Curriculum Standards for literacy instruction and incorporates research-based strategies from the National Reading Panel (2000) to bolster the acquisition of phonemic awareness, phonics, fluency, vocabulary, comprehension, and motivation. Daily reading instruction must be at least 90 minutes. For grades 6, 7, and 8, the literacy curriculum primarily emphasizes comprehension and vocabulary and uses the adopted textbook, *The Language of Literature* (McDougal Littell, 2002). The curriculum also utilizes a number of supplementary materials, including:

- ***Bridges,*** which maintains and builds students' comprehension through a research-based reciprocal-teaching approach. The teacher models how students work in teams on specific tasks related to selected and abridged texts; and
- ***Classroom-Leveled Libraries,*** which provide students with continued opportunities to read high-interest and age-appropriate materials that build vocabulary, fluency, and comprehension.

Inherent in the existing curriculum are four assumptions about literacy learning. First, literacy learning is an active process for constructing meaning through the use of prior knowledge and understanding. Second, literacy develops in a social context; the use of language almost always relates to others. Third, literacy ability increases in complexity if language is used in increasingly complex ways. Literacy learners must engage in texts and conversations that are rich in ideas and

increasingly complex in the patterns of language they display. Finally, learners achieve mastery of language arts literacy not by adding skills one-by-one to their repertoire, but rather by using and exploring language in its many dimensions.

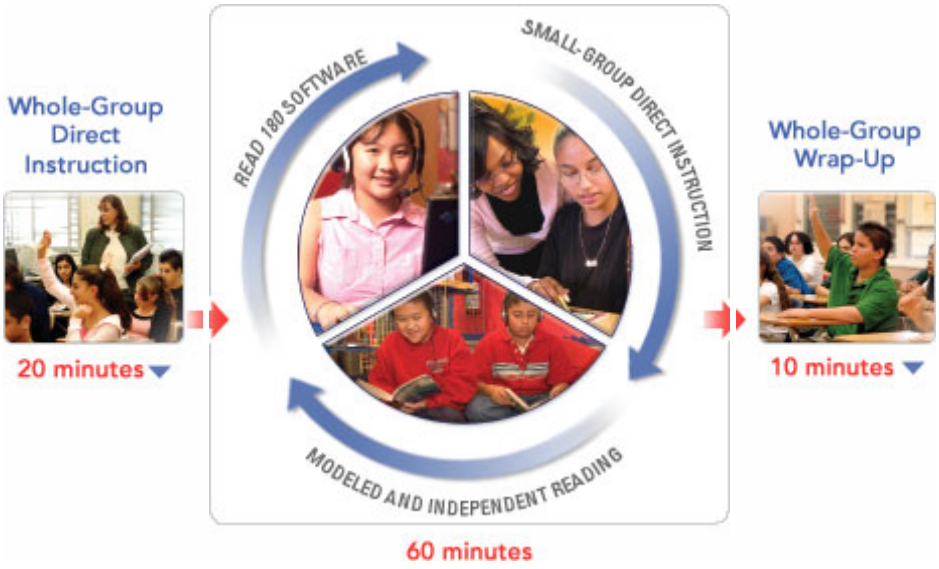
I.B Description of the Intervention Models

I.B.1 Targeted Intervention

Scholastic's READ 180 Enterprise Edition was chosen to replace the district's existing language arts curriculum for the targeted intervention in Newark Public Schools. READ 180 directly addresses the individual needs of adolescents who are reading below grade level through adaptive and instructional software, high-interest literature, and direct instruction.

The READ 180 instructional model provides a straightforward, research-based way to organize instruction and classroom activity. The instructional model consists of a 90-minute literacy block. During that block, the session begins and ends with whole-group teacher-directed instruction (20 and 10 minutes, respectively). During the 60 minutes between the whole-group meetings, students break into three small groups that rotate among three stations, as shown in Figure 1, below.

Figure 1. READ 180 instructional model



During the first 20-minute session, the READ 180 teacher instructs the whole class of no more than 22 students. Over the next 60 minutes, the students break into smaller groups of equal size, which proceed through three 20-minute rotations as follows:

1. *Small-group instruction*: The teacher sits with this small group to provide direct and explicit instruction on reading comprehension strategies utilizing the rBook.

2. *Independent reading*: Students enter a comfortable seating area where they read leveled paperbacks with the option of adding audio through headphones as modeled reading.
3. *Direct instruction (computers)*: Nine topical CD-ROMs provide students with background knowledge and mental models through full-motion video. Students encounter a reading passage based on the video that is at the appropriate ability level of that student. After the video and passage, students proceed through three zones:

   – Word zone – Instruction for developing basic decoding skills;

   – Spelling zone – Instruction in the acquisition and transfer of spelling patterns and sounds; and

   – Success zone – Students are assessed for comprehension, word recognition, and fluency.

For the last 10 minutes of class, the teacher provides a whole-group wrap-up.

In the commercial Scholastic model, the small group portion of the lesson is devoted to direct instruction using READ 180's rBooks only (see Appendix A for READ 180 pacing guide). However, supplementary books from Mc-Dougal Littell are used by the district for modeling and independent reading. The district opted to incorporate the Mc-Dougal Littell series in READ 180 classrooms as an additional resource for exposure to literature.

Lastly, the *Planning Guide* provides a 3-week plan of instruction for the teacher, with four stop points built in to analyze report data to determine differentiated instruction needs. The first 2 days of this time are spent on pre-reading activities, such as building a background in the subject area with anchor videos and previewing vocabulary. The next 6 days are spent on reading strategies, including teaching, practicing, and applying the main idea and details. Days 9 and 10 are then spent on reviewing and extending vocabulary, with days 11 through 13 focusing on writing and grammar. Functional literacy is covered the last day before wrap-up.

I.B.1.1 Professional Development Model

Teachers. All READ 180 teachers will receive 2 days (8 hours) of whole-group training from Scholastic. This training will cover all aspects of the curriculum, from preparation to implementation and evaluation. Consultants will provide teachers with appropriate background information on READ 180 and research supporting its development. Teachers will be prepared for implementing the program by discussing their own role as classroom instructors and through role-playing activities. They will have the opportunity to gain hands-on experience and will be trained to use Scholastic's tools to aid the implementation and management of their classroom program. In addition, READ 180 consultants will also train teachers on how to use assessment results to inform instruction. The training will also stress the importance of teacher participation in ongoing professional development activities. The topics (and time assigned to each) to be covered over the 2-day training are presented below:

45 min. – Program Background and Research
90 min. – 90 Minute Model: The Student Role
90 min. – The Instructional Model: The Teacher's Role
30 min. – Differentiating Instruction
30 min. – Managing READ 180 with the Scholastic Achievement Manager (SAM)
45 min. – The SAM: Hands On Practice
30 min. – Preparing for Your First Three Weeks in READ 180
30 min. – Using Scholastic Read to Support Your Implementation
15 min. – Questions/Evaluation
30 min. – Success Stories/Gathering Questions
30 min. – Improving Achievement on the READ 180 Student Software
90 min. – The READ 180 Teaching System
60 min. – Using the SAM Effectively
60 min. – Using Report Data to Differentiate Instruction
45 min. – Managing Your READ 180 Classroom Effectively
30 min. – Participating in Ongoing Professional Development
15 min. – Final Questions/Evaluation

In addition to the training described above, READ 180 teachers receive ongoing classroom support provided by district resource teacher coordinators (RTCs) and Scholastic consultants. The RTCs are tasked with providing support to teachers for both the whole-school intervention and the targeted intervention. RTCs visit all READ 180 classrooms; conduct needs assessments; provide demonstration lessons, in-class support, and coaching; assist with instructional plans; conduct READ 180 articulation meetings; and serve as liaisons with the district administration.

Scholastic planned visits provide technical support to READ 180 teachers on an as-needed basis, as well as visits to monitor fidelity to the program model. Classroom visits:

- Are based on district, school, and/or teacher needs as they relate to the implementation of READ 180;
- Are recommended in response to results from implementation visits or other professional development needs;
- Take place within the classroom during the READ 180 session;
- Provide opportunities for modeling and feedback within the READ 180 classroom;
- Include pre- and post-visit/coaching conferences with the teacher; and
- Are not evaluations of teachers.

At the end of each visit, the Scholastic consultant debriefs with the teacher by providing:

- A detailed summary of the instructional experience;
- Challenges encountered and how they were solved; and
- Next steps for future support actions.

Periodic status reports are written and provided to building and district leaders to offer updates on teachers' progress toward competency as READ 180 teachers.

Literacy Coaches. Literacy coaches are housed in each school in the district. Literacy coaches in the Striving Reader's treatment schools will receive the same training as the READ 180 teachers, as described above.

Other Staff. Principals receive 2 hours of training from Scholastic on the READ 180 model. This training includes the structure and management of a READ 180 classroom, use of curricular materials, and how to differentiate instruction based on data from SRI reports. Administrators are expected to periodically review SAM reports and analyze the strengths and needs of students. Administrators are also responsible for observing READ 180 classrooms in an effort to ensure optimal fidelity. Administrators should also communicate with the Office of Language Arts Literacy regarding any concerns they have with READ 180 or classroom instruction.

All nine school technology coordinators receive one-half day of training from Scholastic, so that they can better support the installation and operation of the technology component of the curriculum. Technology coordinators are expected to actively monitor the READ 180 equipment and troubleshoot technical issues as needed. They are also responsible for creating student passwords, inputting student information at the beginning of the year, activating student site licenses, and creating class rosters on SAM.

Central office provides resources, both material and human, to all treatment schools in the targeted intervention. Directors and supervisors communicated expectations and schedules with the staff from Scholastic to ensure that the professional development supported the New Jersey state standards and was aligned with district curriculum objectives.

Five RTCs are assigned to serve all Striving Readers schools, expressly to assist participating language arts literacy teachers. The RTCs play a major role in supporting teachers via activities such as coaching; conducting needs assessments of Striving Readers staff; conferring with administration and literacy coaches relative to program planning and implementation; maintaining accurate records; planning relevant professional development activities; giving demonstration lessons; and interpreting student assessment data.

Representatives from Scholastic's READ 180 program conducted on-site support visits on an as-needed basis. These visits consisted of providing technical assistance to teachers, monitoring the program, and ensuring that the model is being effectively implemented as designed. Each of the 10 treatment schools was visited at least once by a consultant from Scholastic in year 2.

I.B.1.2 Participating Schools, Teachers, and Students

For the targeted intervention, eligible middle level schools in Newark were identified based on the following criteria. They had to:

- Be Title I eligible;
- Serve a minimum of two grades (from 6, 7, 8);
- Not already be using READ 180;

- Be categorized as "school in need of improvement" (SINI) under *No Child Left Behind;* and
- Serve a minimum of 25 eligible students.

Based on these criteria 20 schools were eligible to participate in the targeted intervention. These schools were then randomly assigned into treatment and control groups, with the treatment schools slated to receive the READ 180 curriculum. After random assignment had taken place, two schools in the control group were merged leaving 10 schools in the treatment group and 9 schools in the control group. Demographic data from participating schools is included in Table 1. The 19 participating schools serve predominately minority populations and almost half of the students (49.2 percent) are eligible to receive free and reduced meals. These data reflect characteristics of the schools from the 2006-2007 school year.

READ 180 teachers in treatment schools were selected by their principals. When filling other classroom positions in the school, principals typically have control over whom they select for certain assignments. Thus, principals selecting READ 180 teachers were following their typical placement procedures when placing teachers in READ 180 classrooms.

Table 1. Demographic characteristics of participating Striving Readers schools (2006-2007)

School	Grades served	No. of students	No. of teachers	% Asian	% African-American	% Hispanic	% White	% Free & reduced lunch
School 1	K-8	506	44	0.2	96	3.8	0	70
School 2	K-8	319	30	0	97.5	2.2	0.3	32
School 3	PK-8	292	35	0	73.6	26	0.3	75
School 4	3-8	372	32	0	97.6	2.4	0	31.4
School 5	PK-8	446	45	0	78.5	21.5	0	68.6
School 6	K-8	602	48	0	47.7	52.2	0.2	44
School 7	K-8	790	66	1.6	30.8	65.7	1.9	39.7
School 8	PK-8	337	34	0	92.3	7.7	0	77.4
School 9	PK-8	594	49	0	45.1	43.9	10.9	49.2
School 10	K-8	349	31	0	95.1	4.9	0	37.8
School 11	5-8	753	50	0.9	21	77	0.8	56.7
School 12	K-8	572	56	0.2	97.7	2.1	0	45.5
School 13	PK-8	754	66	0.7	42.6	55.2	1.6	43.6
School 14	PK-8	515	45	0.2	46.4	53.2	0.2	48
School 15	PK-8	1041	71	8.74	70.2	13.6	6.6	28.5
School 16	PK-8	464	47	0	93.1	6.7	0.2	61.2
School 17	PK-8	776	56	0.12	29.6	68.4	1.8	38.8
School 18	K-8	776	56	3.5	11	83.6	1.9	31.4
School 19	PK-8	679	68	0	94.4	5.7	0.1	56.3
AVERAGE		**575.6**	**48.9**	**0.8**	**66.3**	**31.4**	**1.4**	**49.2**

For students to be eligible for the targeted intervention in year 1, they had to be enrolled in one of the eligible middle schools and be in grades 6, 7, or 8. Furthermore, student eligibility was based on score on the reading subtest of the 2007 New Jersey Assessment of Skills and Knowledge (ASK). In New Jersey, anyone scoring below a 200 is considered "partially proficient," which is the lowest category possible. Scores from 200 to 249 are "proficient," and scores above 249 are "advanced proficient." The cut-off scores for student eligibility were set by the district, based on one standard deviation from the norm. They are:

- 6th grade = 198;
- 7th grade = 186; and
- 8th grade = 192.

In year 2, a second cohort of 6th graders was added. The cut-off score of 198 applied to the year 2 6th grade cohort as well. Transfer students without a New Jersey ASK score were not eligible to participate in Striving Readers.

In year 2, a total of 1,232 students participated in the intervention; either in the treatment or in the control group. Of the 1,232 students, 648 attended treatment schools and 584 attended control schools. Table 2 shows the distribution of these students by select demographics and by treatment group for years 1 and 2.

I.B.2 Whole-School Intervention

The whole-school intervention is designed to support the expansion of the existing district curriculum. Its goal is to improve students' ability to "read to learn" across multiple content areas. To this end, the intervention provides professional development to improve the literacy instruction of content area and language arts teachers. This professional development is provided through whole group training and is supported by in-school coaching visits. Language arts teachers and literacy coaches receive training from New Jersey City University (NJCU). Content area teachers in mathematics, science, and social science receive training from the National Urban Alliance (NUA).

Table 2. Characteristics of students in the targeted intervention

Number (column %)	Students in treatment schools		Students in control schools		All targeted students	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
Total number of students	663 (48%)	648 (53%)	708 (52%)	584 (47%)	1,371	1,232
Average no. of students per school		64.8		64.9		64.8
Grade						
6th grade	240(36%)	226 (35%)	263 (37%)	179 (31%)	503 (37%)	405 (33%)
7th grade	235 (35%)	233 (36%)	213 (30%)	217 (37%)	448 (33%)	450 (36%)
8th grade	188(28%)	189 (29%)	232 (33%)	188 (32%)	420 (30%)	377 (31%)
Gender						
Male	363 (55%)	361 (56%)	404 (57%)	300 (51%)	767 (56%)	661 (54%)
Female	300 (45%)	287 (44%)	304 (43%)	284 (49%)	604 (44%)	571 (46%)
Economically disadvantaged	556 (84%)	385 (59%)	647 (91%)	335 (57%)	1,203 (88%)	720 (58%)
English Language Learners	52 (8%)	54 (8%)	45 (6%)	41 (7%)	97 (7%)	95 (8%)
Special education	264 (40%)	287 (44%)	273 (39%)	236 (40%)	537 (39%)	523 (42%)
Race/ethnicity						
African-American	384 (58%)	367 (57%)	407 (57%)	315 (54%)	791 (58%)	682 (55%)
Hispanic	271 (41%)	268 (41%)	292 (41%)	257 (44%)	563 (41%)	525 (43%)
White	7 (1%)	4 (1%)	3 (<1%)	9 (1%)	10 (1%)	13 (1%)
Other	1 (<1%)	9 (1%)	6 (<1%)	3 (1%)	7 (<1%)	12 (1%)

Language arts literacy teachers in Striving Readers schools receive training and in-school support from NJCU. The professional development course was designed by the literacy faculty from the NJCU School of Education in consultation with NPS. After the receipt of training, teachers are expected to implement the following research-based strategies in their classrooms:

- Use graphic organizers, including flowcharts, webs, and tables, e.g., K-W-H-L-S, to build student reading comprehension skills;
- Establish routines for effective oral and silent reading;
- Model text annotation, note taking, and post-reading reflection;
- Use anticipation guides, the SQ3R method, and double-entry journals to build student writing, fluency, and reading comprehension skills;
- Use small groups to target and differentiate instruction;
- Model use of context clues and personal dictionaries to enrich vocabulary and build linguistic competence;
- Guide student discussion and use brainstorming techniques to facilitate students' exploration of the connections between reading and writing; and
- Review student work samples, including portfolios, journals, and notebooks to show the use of graphic organizers.

The content of the NJCU training was designed to complement the district's existing curriculum for middle school students wherein students have extended learning time, have the opportunity to read high interest, age-appropriate materials, and work in small groups guided by teachers on reading and writing assignments to maximize cooperative learning.

Supporting the work of NJCU, the Striving Reader RTCs provide additional support to language arts teachers in the form of in-school visits. RTCs conduct in-school visits to eligible teachers throughout the school year beginning in September and ending in June.

Content area teachers in Striving Readers schools receive training and in-school support from NUA, a nonprofit professional development group known for its work in content literacy. To build on the vocabulary, fluency, and reading comprehension skills that are expected to improve as a result of the

instructional strategies undertaken by language arts literacy teachers, math, social studies, and science teachers are expected to incorporate NUA-developed graphic organizers ("Thinking Maps"), including:

- Circle Maps for context description;
- Double Bubble Maps to compare and contrast information;
- Tree Maps for inductive and deductive classification;
- Brace Maps to identify part-whole relationships;
- Flow charts to review sequential order;
- Multi-flow Maps to explicate cause and effect relationships; and
- Bridge Maps to interpret analogies and metaphorical concepts.

Also, based on the NUA professional development, math, social studies, and science teachers are expected to use anticipation guides to model brainstorming and pre-writing strategies, as well as use taxonomies to promote word study and vocabulary development.

I.B.2.1 Professional Development

Professional development for the whole-school intervention was delivered by two providers; NJCU and NUA. NJCU provided 4 half-days (16 hours) of large group training that constituted the summer institute on August 20-23, 2007. Additionally, whole-group training sessions were held during the school year on October 24, 2007, January 20, 2008, and February 27, 2008 (each provided 5.5 hours of training). To support the district's core literacy program, NJCU's professional development was designed to introduce and reinforce the use of instructional strategies that enhance vocabulary development, fluency, and reading comprehension. The instructional strategies of NJCU's large group trainings primarily addressed:

- Critical writing strategies;
- Reading comprehension;
- Literacy strategies for ELLs/Literacy strategies in the content area;
- Creating learning zones in the classroom;

- Vocabulary development;
- Do-Nows that do!;
- Grouping for literacy instruction: using classroom zone;
- Developing comprehension strategies for Middle Schools; and
- Literature circles and informational text.

A binder of materials which included the Newark Public Schools "Language Arts Literacy Policy and Practices for Elementary, Middle and Secondary Schools," and articles, strategies, graphic organizers and sample activities on literacy strategies was distributed at each NJCU large group professional development event. Daily feedback surveys were also used to ascertain the additional needs of participants; the workshop topics were revised based on the feedback to better address the identified areas of need of each school. In addition to the whole-group training described, NJCU teachers receive ongoing classroom support in the form of in-school coaching visits.

The National Urban Alliance, the second professional development provider, is dedicated to providing professional development for teachers to support literacy across the content areas. Math, Science, and Social Studies teachers were to receive three half-day orientation sessions (12 hours total) during the summer institute and two large-group workshops during the school year (each providing 5.5 hours of training). The summer institute and large-group workshops were designed to train teachers in cognitive strategies that focus on the teaching, learning, and assessment of advanced thinking; to break down school isolation; to build effective school teams; and to create a community of learners. The instructional strategies of NUA's large group trainings primarily addressed:

- NUA content literacy strategies;
- Content area grouping;
- Strategy review chart;
- Strategy instruction;
- Instructional Flow Map to increase comprehension;
- Vocabulary;
- Skill development;
- Strategy application;

- Content and strategies practice for the classroom; and
- Comprehension strategies.

The primary content literacy skills addressed in the National Urban Alliance's professional development are vocabulary, fluency, and comprehension developed through defining in context, describing, comparing and contrasting, classifying, sequencing, cause and effect reasoning, part-whole relationships, and analogies. In addition to the whole-group training described, NUA teachers receive ongoing classroom support in the form of in-school coaching visits.

I.B.2.2 Participating Schools, Teachers, and Students

The 19 schools participating in the targeted intervention (see Section I.B.1.1 for eligibility criteria) are also the schools participating in the whole-school intervention. However, the whole-school intervention is not being evaluated with a randomized design, and so there are no treatment and control schools. For the whole-school intervention, eligible teachers in all 19 schools receive the treatment.

In year 2, there were 363 teachers eligible to receive professional development as part of the whole-school intervention. Of these, 147 were eligible for professional development provided by the NUA (teachers who taught *only* math, science, or social studies). Another 100[4] teachers were eligible for training from NJCU (teachers who taught *only* language arts). In addition, 116 teachers were eligible for both NUA and NJCU training. These teachers either taught both language arts and a content area subject (usually social studies), or they taught all subjects (usually special education or bilingual teachers). Table 3 provides the number of teachers eligible for the professional development sessions for the two whole-school interventions, by subject area(s) taught.

Table 3. Distribution of teachers by subjects taught

Teacher subject	NUA		NJCU	
	No. of teachers	No. of schools	No. of teachers	No. of schools
Content area only (NUA)	147	19	N/A	N/A
Language arts only (NJCU)	N/A	N/A	100	19
Content area & language arts	116*	19	116*	19
Total	**263**	**19**	**216**	**19**

*These teachers are counted in both categories.

[4] Includes 19 literacy coaches.

Students in the whole school intervention are from all 19 Striving Readers schools. All 6th, 7th, and 8th[h] grade students from the participating Striving Readers schools were included.

I.C Logic Models

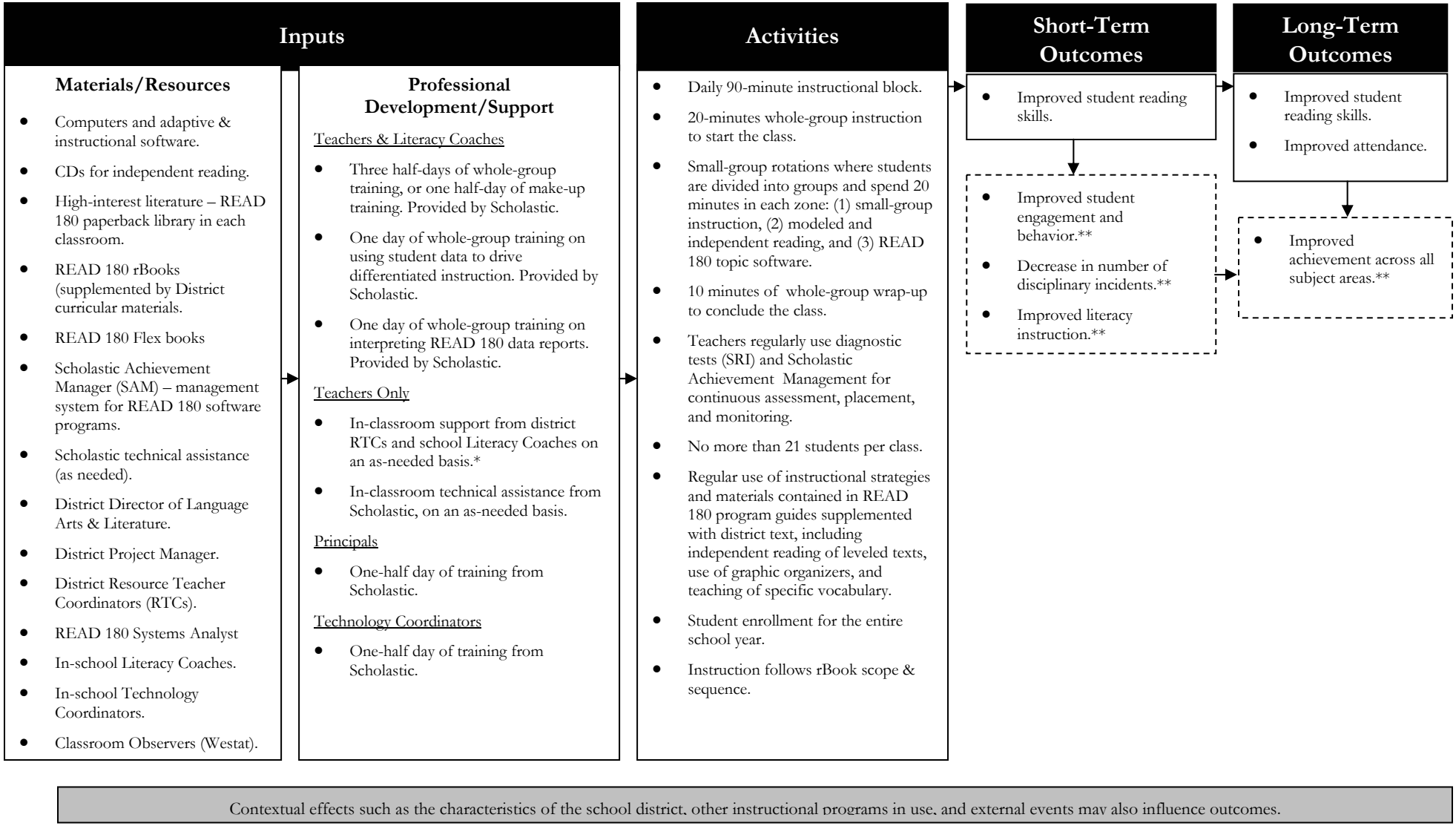
I.C.1 Targeted Intervention

The targeted intervention provides language arts for middle school students through direct instruction, instructional software, and literature. The targeted intervention replaces the regular language arts curriculum. The theory of change that underpins READ 180 is displayed in Figure 2. This theory of change provides the conceptual framework for the evaluation.

The first two columns on the left describe the resources necessary to implement the intervention. The first column lists the materials and resources that should be in place to support full implementation and use of READ 180. Materials include leveled library books, student rBooks, and Flex books. Furthermore, the SAM database system allows teachers to periodically review and analyze the strengths and needs of students. The second column includes the professional development and support services that are necessary for implementation. Scholastic staff, RTCs, literacy coaches, and technology coordinators all support the intervention. The third column describes the activities of the intervention and includes instructional strategies that are necessary for full implementation of the targeted curriculum. All READ 180 teachers are intended to receive 2 days (8 hours) of whole-group training from Scholastic. Scholastic also provides a make-up training (5.5 hours) for those teachers who missed the summer session.

The last two columns of the logic model provide the short- and long-term outcomes that are anticipated. The theory of change posits that when all of the necessary resources are in place and the appropriate teaching and learning activities occur, students will first demonstrate improved reading skills and improved classroom behavior. The theory of change then suggests that these short-term outcomes will, in turn, result in longer term impacts as reflected in improved achievement test results, increased school attendance, decreased discipline problems, and gains in student learning in all subject areas (White and Haslam, 2005).

Figure 2. Targeted intervention logic model



**The RTC school visits supported both the whole-school and targeted interventions of the Newark Striving Readers program.*

***These outcomes are not directly measured under the Newark Striving Readers grant.*

I.C.2 Whole-School Intervention

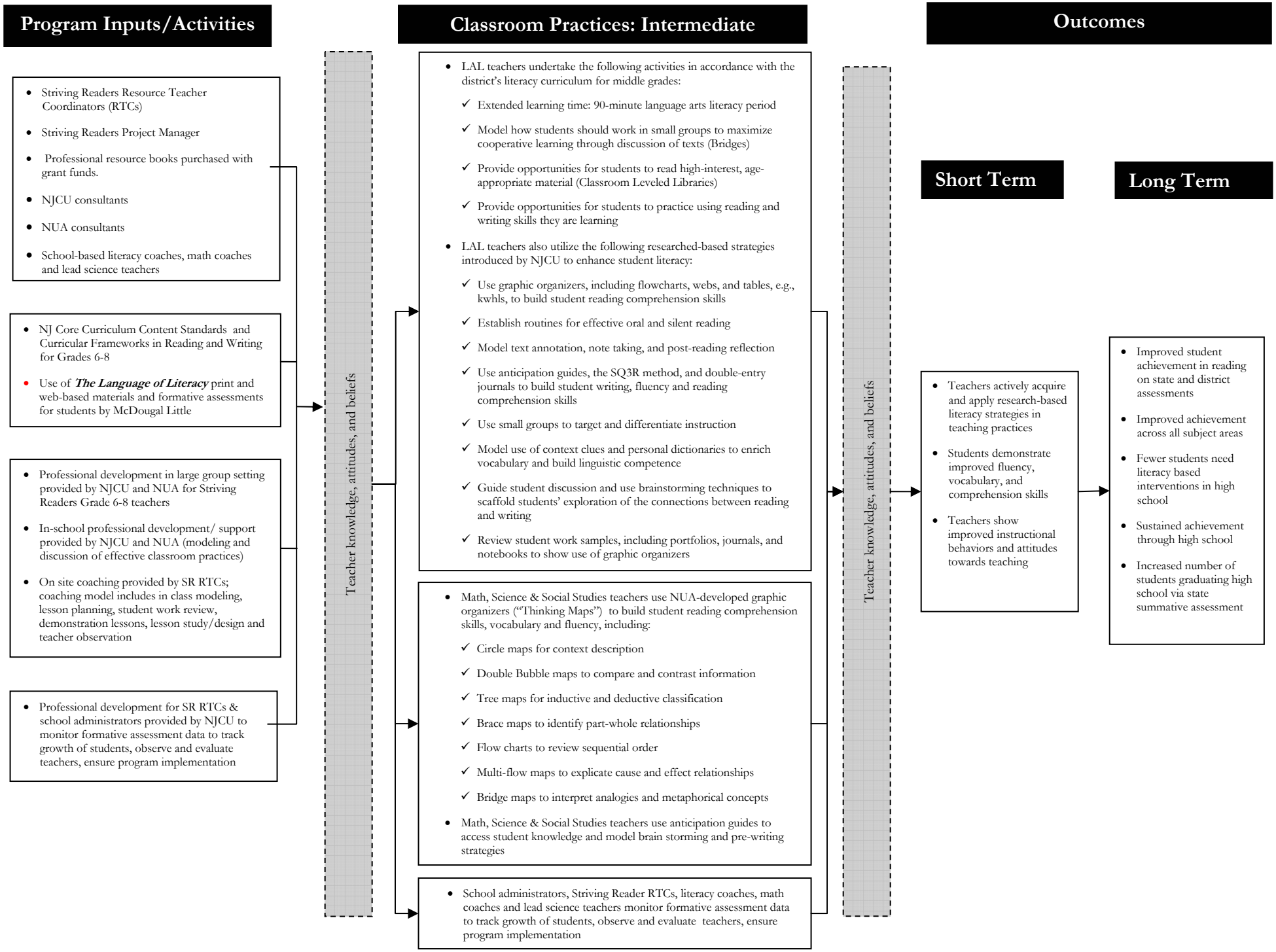
The theory of action driving the district's whole-school intervention is illustrated in Figure 3. According to the logic model, language arts literacy teachers (including literacy coaches) receive professional development from NJCU. NUA provides the professional development for mathematics, science, and social studies content area teachers. Striving Reader RTCs support the implementation of NJCU's professional development approaches through site-based demonstration lessons and coaching.

The first column of the whole-school intervention logic model documents the basic resources that are needed to fully implement the intervention, such as professional resource books, *The Language of Literature* print and web-based materials, and in-school support from RTCs, NUA, and NJCU consultants. The second column documents instructional strategies. These classroom practices incorporate what literacy experts and practitioners recommend to help middle school students master basic reading skills; direct, explicit instruction in comprehension; modeling of reading and thinking strategies for comprehension; cooperative learning and discussion of texts among students; self-selected reading at students' ability levels to build motivation; ongoing progress monitoring; writing; age-appropriate and diverse reading materials; and interdisciplinary, classroom-based efforts to focus on literacy. As a result, the whole-school intervention is expected to yield the following short- and long-term outcomes:

Short-Term Outcomes

- Improved student fluency, vocabulary, and comprehension skills; and
- Improved teacher instructional behaviors and attitudes toward teaching.

Figure 3. Whole-school intervention logic model



Long-Term Outcomes

- Improved student achievement in reading on state assessments;
- Improved student achievement across all subject areas;
- Fewer students needing literacy-based interventions in high school;
- Sustained student achievement through high school;
- Increased number of students graduating high school; and
- Teacher implementation of research-based strategies as part of instructional repertoire.

I.D Brief Overview of Key Evaluation Design Features

I.D.1 Targeted Intervention

I.D.1.1 Key Research Questions

The theoretical model presented by Scholastic for READ 180 presents a series of short- and long-term outcomes. Short-term outcomes include improved reading skills and improved student behavior, while longer term outcomes include continued improvement in reading skills, increased school attendance and grade promotion and decreased disciplinary incidents. Some of these claims will be tested via the research questions presented in this section.

The three primary research questions that motivate the study design for the targeted intervention are:

1. Does READ 180 significantly improve the reading skills of targeted students?
2. Does READ 180 significantly improve school attendance of targeted students?
3. Do different types of students benefit from READ 180 in different ways?

In other words, the evaluation will determine whether READ 180 has a demonstrable impact[5] and if it works better for some students than for others. These questions will be addressed statistically by comparing students in treatment schools to students in control schools.

[5] By impact we mean the difference between outcomes observed for students receiving the treatment and what *would have been observed for these same students had they not participated in READ 180.*

I.D.1.2 Unit of Random Assignment

The schools eligible to participate in the Striving Readers program were randomly assigned to either the intervention or a control condition in May 2006. (See Section I.B.1.2. Participating Schools and Students, for school eligibility requirements.) The targeted evaluation is therefore a randomized cluster design; no classroom- or student-level random assignment is involved. Although randomly assigning students would be the most statistically efficient design, it was not feasible for this study. One of the main constraints was the cost of implementation, which is largely determined by the number of participating schools. Additionally, there are contamination and spillover effects associated with student-level randomization. For example, teachers are likely to be aware that a colleague is delivering a special intervention, and this awareness may influence their behavior. Additionally, intervention and nonintervention students interact, possibly closing the gap between their differences. In either case, the impact estimates would be biased toward zero.

Fairness is another factor that argued for implementing the intervention at the school level. Principals may resist cooperating if some of their teachers are provided with special training and materials while others are not. Even if principals allowed differential treatment within a school, there may be pressure to allow some practices to spill over into control classrooms, thus biasing impact estimates. There would also likely be pressure to allow students who "deserve" the treatment to transfer (cross over) to treatment classrooms, again biasing the impact estimates.

Accordingly, we opted for a design that would randomly assign schools to the intervention group or to the control group. As stated above, this design eliminates many of the threats to the study's feasibility and validity. Moreover, to increase the precision of the estimates, we used a randomized block design. The school-level variables used for blocking[6] (in order of priority) were as follows:

1. Number of eligible students;
2. Number of years school has been identified as 'in need of improvement';
3. Number of eligible students whose home language is not English; and
4. Number of eligible students with an individual education plan (IEP).

[6] Blocking variables will be included in the statistical model to estimate impacts.

Using the number of eligible students as the primary blocking variable, schools were divided into three groups; large schools (>100 eligible students), medium schools (51-100 eligible students), and small schools (25-50 eligible students). Within these three strata, schools were then sorted by number of years in need of improvement under *NCLB* and then by home language and special education status. The baseline sample of schools was 20: 10 treatment and 10 control. Over the summer of 2006, two of the schools merged. By chance, both were control schools so that the final sample is 10 treatment and nine control schools.

I.D.1.3 Key Measures for Student Outcomes

The key measures of student outcomes were Reading and Language Arts subscales of the SAT 10 and school attendance (as shown in table 4). The Reading and Language Arts portion of the SAT 10 comprises three subtests; Vocabulary, Reading Comprehension, and Language Arts. The Reading subtest covers vocabulary and reading comprehension. Reading vocabulary includes concepts such as synonyms, multiple-meaning words, and use of context clues to decipher the meaning of unknown words. The Reading subtest also measures students' ability to initially understand explicit details in a passage, interpret information in a passage, critically analyze and evaluate information in a passage, and apply appropriate reading strategies.

The Reading Comprehension subtest assesses students' reading achievement using text read for enjoyment (e.g., fiction, poetry, etc.), text read for informational or expository purposes (e.g., science, textbook material, etc.), and everyday functional text (e.g., directions, labels, forms, etc.). The items in this section consist of increasingly complex reading passages, along with multiple-choice questions associated with each passage. There are six to nine passages, depending on grade level.

The Language Arts subtest is divided into three sections. The first focuses on language mechanics, including capitalization, punctuation, and usage. The second section focuses on language expression, including writing strategies and sentence structure knowledge. The final section of the language arts subtest also focuses on language expression, but on a higher level than the previous section. Students analyze written passages for the assessment of how well they recognize extraneous information and descriptive language and the combining of simple sentences.

Because READ 180 also claims to improve the attitude of struggling readers toward active participation in the classroom, the last student outcome is school attendance. Attendance was measured as the number of unexcused absences during the school year.

Table 4. Key measures of student outcomes

Measures	Student
SAT 10	
Language Arts	✓
Reading Comprehension	✓
Vocabulary	✓
School Records (Attendance)	✓

I.D.2 Whole-School Implementation

I.D.2.1 Key Research Questions

There are two main goals for the whole-school evaluation. The primary goal is to determine the short-term impact of the professional development on teacher attitudes and instructional behavior. A series of teacher surveys was used to collect these data. The secondary goal of the whole-school evaluation is to determine whether these potential changes in teacher attitude and behavior affect student achievement, using data from the New Jersey state reading assessment.

These two goals are reflected in the three primary research questions for the whole-school evaluation. They are:

1. Does participation in an ongoing literacy professional development program change the attitudes and instructional practices of middle school teachers?

2. Does participation in an ongoing literacy professional development program affect the attitudes and instructional practices of some groups of teachers more than others?

3. Do these changes in teacher instructional practices result in improved reading skills of middle school students?

I.D.2.2 Unit of Random Assignment

There was no random assignment for the whole-school intervention. All 6th, 7th, and 8th grade teachers from all 19 Striving Readers schools were eligible to receive the whole-school professional development and in-school coaching visits.

Initially, it was hoped that the whole-school evaluation would study only the teachers in schools assigned to the control condition on the READ 180 evaluation. This was because the READ 180 treatment will likely confound the effects of the whole-school intervention. However, this would allow too few teachers into the analysis. Therefore, it was decided that all teachers should be included in the evaluation, and that READ 180 status would be used as a covariate to statistically control for the effects of that intervention.

I.D.2.3 Key Measures for Student and Teacher Outcomes

The key measure of teacher outcomes was the teacher survey. The teacher survey measured basic demographic information and previous training experience of participating teachers. It also captured the degree to which the teacher felt supported by his/her institution and his/her job satisfaction. Teachers also had an opportunity to self-evaluate their effectiveness at delivering literacy concepts, and provide information on their instructional practices. This information also tapped into their attitudes about what is important and appropriate in the classroom. Finally, teachers provided information on how they used students' assessments to tailor their classrooms. The pre-survey was administered prior to the receipt of any Striving Readers training. Post surveys were then administered an additional 5 times over the course of 2 years to capture any change after receiving training.

The key measure for students' outcomes in the whole school intervention is the state literacy assessment, the New Jersey Assessment of Skills and Knowledge (NJASK). Students in grades 6 and 7 were assessed with the NJASK, while grade 8 students were assessed with the NJASK8. More information on both of these assessments is provided below.

Grades 6 and 7: New Jersey Assessment of Skills and Knowledge

The language arts literacy portion of the NJASK for grades 6 and 7 provides a variety of texts, illustrations and activities integrated in such a way that encourages students to think, communicate and create original work. The variety and sequence of the assessment tasks aim to engage and sustain student interest and clearly measure what students know and can do. In each of the assessments, students write their own text and analyze text provided for them. Item types include performance-based writing tasks and multiple-choice and open-ended reading tasks. The NJASK focuses on the following content clusters:

- *Work with or interpreting text (reading)*: These tasks involve identifying main ideas or themes, identifying supporting details, following directions, paraphrasing, text organization and purposes for reading.
- *Analyzing or critiquing text (reading)*: These tasks involve enhancing understanding through questioning, clarifying, and predicting; predicting meanings; drawing conclusions; and forming opinions about text and author techniques. Students are asked to explain or identify fundamentals and nuances of textual conventions and literary elements.
- *Generating text (writing)*: These tasks involve the use of pictures or text to make decisions, solve a problem, or write a story, thereby generating original student work

NJ ASK data are reported as scale scores ranging from 100 to 300 and are broken down into three proficiency levels:

Advanced Proficient	250-300
Proficient	200-249
Partially Proficient	100-199

The scores of students in the Partially Proficient category are considered to be below the state minimum for proficiency.

Grade 8: New Jersey Assessment of Skills and Knowledge Grade 8

The NJASK8 measures student ability in the areas of language arts literacy and is used to indicate progress students are making toward mastering skills they will need to pass the High School Proficiency Assessment. These skills are outlined in the state Language Arts Literacy Core Curriculum Content Standards and cover the content clusters mentioned above in the NJASK. The

assessment is designed to help students ask questions, speculate, explore new ideas and form tentative opinions.

The language arts literacy portion of the assessment focuses on students' ability to construct meaning through text. It is an integrated, project-oriented unit through which students draw upon their speaking, listening, writing, reading, and viewing experiences to think, learn, communicate, and create original work. The language arts assessment provides a variety of texts, illustrations, and activities that are intended to engage and sustain student interest in the content and sequence of assessment topics and tasks. In the assessment, students alternate between generating their own text and analyzing text provided for them. This permits students to use and enrich their literacy experiences as they demonstrate their knowledge of and skills in language use in varied contexts of language arts literacy.

The NJASK8 uses a variety of tasks to assess student performance. These include performance-based tasks (speaking and writing) and multiple-choice and open-ended (reading, listening, and viewing). The assessment also includes audio and visual materials and formats to help students construct meaning as they speak, listen, write, read and view. Finally, students will use information from a reading selection or selections to complete a writing project. Students will be provided time to prepare notes and materials for their speaking presentations.

NJASK8 data are reported as scale scores ranging from 100 to 300, and are broken down into the same three proficiency levels as the NJASK for 6th and 7th graders:

Advanced Proficient	250-300
Proficient	200-249
Partially Proficient	100-199

The scores of students in the Partially Proficient category are considered to be below the state minimum for proficiency.

Table 5 lists the key measures of student and teacher outcomes.

Table 5. Key measures of teacher and student outcome variables

Measures	Teacher	Student
Teacher Survey		
Perception of Institutional Support	✓	
Job Satisfaction	✓	
Self Evaluation of Effective Teaching	✓	
Classroom Instructional Practices	✓	
Student Assessment	✓	
Literacy Skills Assessment	✓	
NJASK (6th & 7th grade assessment)		✓
NJASK8 (8th grade assessment)		✓
School Records (Attendance)		✓

Implementation of the Targeted Intervention: Years 1 and 2

II

II.A. Implementation Study Design

The extent to which treatment schools fully implemented their assigned curricula in was measured and summarized in both year 1 and year 2 of the evaluation. In year 1, fidelity was measured via classroom observations and administrative data from the District. In year 2, observations were not conducted due to a change in the evaluation design.[7] However, administrative data were available in year 2, and these data were analyzed for fidelity. As less data were available in year 2, the overall fidelity scores from year 1 are not directly comparable to year 2. However, some fidelity subscores are comparable, and these are provided in the following sections of this report.

II.B. Implementation Results

To determine the degree of fidelity to READ 180, multiple components were evaluated for each READ 180 teacher. Subscores have been developed to measure the extent to which each component was implemented. These components are:

- Training;
- Class size;
- Ongoing student assessments; and
- Instructional software.

Each of these components is discussed in the following sections.

[7] The original evaluation plan was longitudinal in nature, which required only one measure of fidelity (in year 1). However, this was modified in spring 2008 to be a repeated cross-sectional design. Classroom observations for fidelity have been reintroduced in year 3.

II.B.1 Training

II.B.1.1 Teachers

Fifty-six percent of teachers received the full dosage of Scholastic's training in the curriculum in year 1, whereas in year 2 the percentage dropped to 8 percent. The definitions of participation levels are provided in Table 6. The number and percentage of teachers at each of the levels of fidelity for years 1 and 2 are provided in Table 7.

Table 6. Participation categories for teachers: Minimum number of days required for full, adequate, and low participation.

Component	Full	Adequate	Low	None
Summer institute	2 days			0 days
October	1 day	3 days	1-2 days	0 days
May	1 day			0 days

Table 7. Number & percentages of teachers by level of participation in professional development, years 1 and 2

	Year 1		Year 2	
	Number	Percent	Number	Percent
Full participation	13	56.5%	2	8.0%
Adequate participation	5	21.7%	6	24.0%
Low participation	5	21.7%	13	52.0%
No participation	0	0%	4	16.0%
TOTAL	23	100%	25	100%

It is unclear why teacher participation in Scholastic's trainings dropped so dramatically from year 1 to year 2. Part of the reason may be that the grant was without a project manager during the first part of year 2. Steps have been taken in year 3, with the addition of the coordinator, to increase participation at these trainings.

In year 2, Scholastic provided two training sessions for READ 180 teachers. The first was held during the summer institute, August 21-22, 2007. A followup training was provided on October 24, 2007. In addition, on May 21, 2008, a District Middle School conference was held in which an RTC and a literacy coach facilitated a session on READ 180 and its components.

The number of hours of training provided at each session in year 2 and the percentage of READ 180 teachers attending are provided in Table 8, below.

Table 8. Teacher participation in READ 180 training in year 2

Session	Hours	Teacher participation
August 21, 2007	4	32%
August 22, 2007	4	40%
October 24, 2007	5.5	80%
May 21, 2008	2	28%

One extra READ 180 teacher was added in year 2, bringing the total to 25. However, teacher turnover was substantial with 40 percent of year 1 READ 180 teachers not returning in year 2. Twenty-five percent of new teachers did not participate in any of the training sessions listed in Table 8. Ultimately, two of the teachers not trained previously received a make-up training conducted by a Striving Readers RTC.

II.B.1.2 Coaches

In both year 1 and year 2, the literacy coaches from the treatment schools were invited to attend the same training sessions as the teachers. In year 1, 20 percent of the coaches received training in the READ 180 curriculum. In year 2, none of the coaches attended the summer training due to a scheduling conflict. Literacy coaches opted to attend the NJCU training that supported all literacy teachers (K-8 teachers). Literacy coaches had to weigh the benefits to their school of which training session to attend. Each literacy coach is responsible for as many as 35 language arts classrooms from grades K to 8. Therefore, it may have been difficult to justify a focus on one or two classrooms at the expense of the others.

II.B.1.3 Other Staff

In year 1, all of the school principals attended the implementation meeting and the Scholastic training session. Furthermore, all technology coordinators attended their READ 180 technical training session. In year 2, 5 of the 10 treatment school principals attended READ 180's training on October 24, 2007. All technology coordinators attended their READ 180 technical training session.

In year 2, treatment schools received visits from RTCs specifically about READ180 between September 11, 2007, and June 24, 2008. On average, these treatment schools received 19.4 visits, ranging from 7 to 38, as illustrated in Table 9. During these visits RTCs met primarily with teachers,

but there were instances in which they met with literacy coaches, vice principals, and principals. Visits consisted of identifying READ 180 students, reviewing READ 180 lesson plans, using SRI data and the student management system, monitoring, coaching, and modeling lessons.

Table 9. Number of READ180 RTC visits received by school

School	Number of visits
School 4	20
School 5	19
School 6	22
School 8	38
School 10	7
School 13	15
School 14	23
School 15	18
School 16	13
School 17	19
Average	**19.4**

II.B.2 Class size

Scholastic's READ 180 materials indicate that no more than 21 students should be enrolled in a READ 180 classroom[8]. The data used to measure fidelity to this component were provided by the district from the SAM database. Many READ 180 teachers teach more than one section of READ 180. For example, a particular teacher may have a class of 6th graders, a class of 7th graders, and a class of 8th graders. Therefore, to determine fidelity to this component, the percentage of sections that have fewer than 21 students is used, as outlined below.

Pctg. of sections taught with <22 students	Scale	Level
100%	4	Full
50 – 99%	3	Adequate
1 – 49%	2	Low
0%	1	None

If a teacher has three READ 180 sections, and all of them are of the correct size (fewer than 22 students), then 100 percent of the sections meet the criteria for this component, and they would be classified as fully implemented. The number and percentage of teachers for years 1 and 2 at each of the levels of participation outlined above are provided in Table 10.

[8] Scholastic states that "enrollment should not exceed 21 students, with 15-18 students representing an ideal class size" Scholastic *READ 180 Enterprise Edition Research Protocol and Tools* – Implementation Checklist (p. 11)

Table 10. Number & percentages of teachers by level fidelity to class size requirements, years 1 and 2

	Year 1		Year 2	
	Number	Percent	Number	Percent
Full	17	73.9%	22	100.0%
Adequate	3	13.0%	0	0.0%
Low	0	0.0%	0	0.0%
None	3	13.0%	0	0.0%
TOTAL	23	100%	22*	100%

*Two classrooms had teachers who co-taught students. Two classrooms had teachers leave their respective school mid year.

In year 1, 74 percent of teachers had class sizes within Scholastic guidelines. In year 2, all teachers had class sizes of 21 students or less.

II.B.3 Ongoing Student Assessment

Scholastic's SRI Assessment allows teachers to monitor student progress by assessing comprehension reading growth. This assessment tool compares both individual and group scores, which allows for administrators to make recommendations for regrouping students based on those scores. Scholastic stresses the importance of ongoing monitoring of student performance so that teachers can use the information to most effectively differentiate instruction and check progress. Scholastic recommends a minimum of three SRI assessments per year.[9] The number of SRI assessments for all students were analyzed to determine fidelity. These data were provided by NPS from the SAM database. The criteria used to determine the level of fidelity to this component is provided below:

Pctg. of students with 3 or more SRIs	Scale	Level
75 – 100%	4	High
50 – 74%	3	Adequate
25 – 49%	2	Low
0 – 24%	1	Very Low

The number and percentage of teachers in years 1 and 2 at each of the levels of participation outlined above are provided in Table 11.

[9] Scholastic states that regular assessment of student reading and writing proficiency is necessary through the "administration of the SRI (3-5 times per year)" Scholastic *READ 180 Enterprise Edition Research Protocol and Tools* – Implementation Checklist (p. 11)

Table 11. Number & percentages of teachers by level fidelity to assessment requirements, years 1 and 2

	Year 1		Year 2	
	Number	Percent	Number	Percent
High	20	90.9%	22	100.0%
Adequate	1	4.5%	0	0.0%
Low	1	4.5%	0	0.0%
Very Low	0	0.0%	0	0.0%
TOTAL	22*	100%	22**	100%

* Data for one teacher was unavailable

**Two classrooms had teachers who co-taught students. Two classrooms had teachers leave their respective school mid year.

It should be noted that the attendance of a student could affect the number of SRIs that a student is present to take, with chronically absent students or mid-year transfer students being less likely to take the full complement of assessments. Despite this potential challenge, the vast majority of teachers assessed more than 75 percent of their students at least three times during year 1. In year 2, all teachers assessed over 75 percent of their students at least three times during the school year. On average, teachers completed five SRIs per student in year 2.

II.B.4 Instructional Software

Part of the READ Instructional Model consists of a 60-minute segment in which students break into three small groups that rotate among three stations: small group instruction, independent reading, and direct instruction (computers). Administrative data were analyzed on the computer rotation. Data were not available on the fidelity of small group instruction and independent reading.

Scholastic recommends that students use the software a minimum of three times a week and 15 minutes per session.[10] The numbers of student sessions as well as the length of these sessions were provided by NPS from the SAM database. The percentage of students who received both a minimum of three sessions per week, and a minimum of 15 minutes per session was used to determine fidelity to this component, as shown below.

[10]Scholastic states that "to receive the full benefits of READ 180, your students should use the topic software at least 15 minutes a day" Scholastic *READ 180 Enterprise Edition Placement, Assessment, and Reporting Guide* (p. 81)

Pctg. of students with adequate exposure to software	Scale	Level
75 – 100%	4	High
50 – 74%	3	Adequate
25 – 49%	2	Low
0 – 24%	1	Very Low

The number and percentage of teachers at each of the levels of participation outlined above are provided in Table 12.

In year 1, 65 percent of teachers ensured that more than half of their students had adequate levels of exposure to the instructional software. In year 2, the percentage fell to 9 percent. To explore the possible reasons for this drop, the two parts of this subscale (number of sessions and time per session) are examined separately for year 2 in Table 13.

Table 12. Number & percentages of teachers by level fidelity to instructional software guidelines, years 1 and 2

	Year 1		Year 2	
	Number	Percent	Number	Percent
High	15	65.2%	2	9.1%
Adequate	6	26.1%	0	0.0%
Low	2	8.7%	2	9.1%
Very Low	0	0.0%	18	81.8%
TOTAL	**23**	**100%**	**22***	**100%**

*Two classrooms had teachers who co-taught students. Two classrooms had teachers leave their respective school mid year.

As can be seen from Table 13, the vast majority of teachers adhered to the recommended 15 minute length of session. However, fidelity to a minimum of three sessions per week appeared to be more of a challenge. RTCs have noted instances where students are not logging off of the computer properly, which may have led to an underestimate in software usage. However, increased use of the Scholastic Achievement Manager (SAM) to generate classroom participation reports at regular intervals during the school year may alert teachers to this error during the school year, which should improve fidelity to this component.

Table 13. Year 2 teacher-level summary scores for time on instructional software by criteria

School	Classroom teacher	Instructional minutes score	Fidelity to instructional minutes	Number of sessions score	Fidelity to number of sessions	Full fidelity component score	Full fidelity level
School 4	A1/A2*	4	High	1	Very low	1	Very Low
School 4	B	3	Adequate	1	Very low	1	Very Low
School 5	A1/A2+	4	High	2	Low	2	Low
School 6	A	3	Adequate	1	Very low	1	Very Low
School 6	B	4	High	1	Very low	1	Very Low
School 6	C	4	High	4	High	4	High
School 6	D	4	High	1	Very low	1	Very Low
School 8	A	4	High	1	Very low	1	Very Low
School 8	B	4	High	1	Very low	1	Very Low
School 10	A	4	High	4	High	4	High
School 13	A	4	High	1	Very low	1	Very Low
School 13	B	4	High	1	Very low	1	Very Low
School 13	C1/C2+	3	Adequate	1	Very low	1	Very Low
School 13	D1/D2+	3	Adequate	1	Very low	1	Very Low
School 14	A	4	High	1	Very low	1	Very Low
School 15	A	4	High	1	Very low	1	Very Low
School 16	A	4	High	1	Very low	1	Very Low
School 16	B	4	High	1	Very low	1	Very Low
School 17	A	4	High	1	Very low	1	Very Low
School 17	B1/B2*	2	Low	2	Low	1	Very Low
School 17	C1/C2+	4	High	3	Adequate	2	Low
School 17	D	4	High	1	Very low	1	Very Low
Average		**3.7**		**1.5**		**1.4**	

*Teachers co-taught students. +Initial teacher left school mid-year and was replaced.

II.C. Barriers to Targeted Implementation

The greatest challenge in implementation of the targeted intervention in year 2 continued to be the inclusion of large numbers of special needs students into the READ 180 program. Coordination and communication issues remain between the Office of Language Arts Literacy and the Office of Special Education. Some of the special needs students still may not have the minimum skills required to benefit from READ 180. The Child Study team members continue to pose that READ 180 violates the IEPs of some students. The district has worked to ensure buy-in from the inclusion teachers as much as possible, but this has been difficult.

Another challenge concerned participation in READ 180 training. Not all teachers were trained in year 2. Furthermore, no literacy coach received training in year 2. Instead of attending the

READ180 training, literacy coaches opted to attend the NJCU training that supported all literacy teachers. Even though the literacy coaches were not trained in READ 180, the READ 180 classrooms were heavily supported by the Striving Readers RTCs. In addition, the project manager position was unfilled during the summer and fall of year 2, as discussed previously.

II.D. Year 1 to Year 2 Implementation

The district is continuing to work through challenges in year 2. Advance notice has been given to inform literacy coaches and teachers on training dates and the importance of attending the READ 180 training sessions. Moreover, there has been more communication among the district, RTCs, and schools. NPS continues to facilitate a way to link the content and the participation of school-based coaching.

The RTC Visitation Log (Appendix B) was modified in year 2. As mentioned previously, in year 1 the logs did not differentiate between visits made for the whole-school or for the targeted intervention. The modification of this log in year 2 has enabled the district to determine which visits were for READ 180 or the whole-school intervention. District staff have been able to communicate more effectively with RTCs, administrators, and literacy coaches as a result of using this form. (See Appendix B for measures used to evaluate teacher fidelity.)

Impacts of the Targeted Intervention: Years 1 and 2 III

III.A Study Design and Analytic Approach

III.A.1 Sampling Plan

III.A.1.1 Power

Power estimates describe how likely it is that differences between treatment and control groups can be detected. Power was estimated in the fall of 2006 using the following set of assumptions:

1. A total of 19 schools randomly assigned to treatment and control groups;
2. About 90 students at each school participating at each time point;
3. An intraclass correlation (ICC) of .02 (2% of the total variation in the outcome is between schools); and
4. An alpha level for the statistical test set at .05 (two-tailed test).

The power calculations assume that level 2 covariates explain none of the variation in student outcomes. In fact, with a baseline ICC of 0.02, there is not much between-school variation to explain. Based on these power calculations, an effect size of .24 is estimated (just under a quarter of a standard deviation).

Using the standard deviations from the eighth-grade Language Arts assessments from the SAT9, Table 14 illustrates the boost in scores due to treatment, assuming an effect size of .24.

Table 14. Illustrative example of the practical significance of a .24 effect

SAT9 subtest	Standard deviation	Effect size of treatment	Yearly score increase	Total increase over 4 years
Reading Vocabulary	46	.24	11 points	33 points
Reading Comprehension	41	.24	10 points	30 points
Language Arts	38	.24	9 points	27 points

This example shows that, with an effect size of .24, the power should allow us to detect a difference of 9 points (and higher) between treatment and control students each year on the Language Arts subtest.

For assessing the effect of READ 180 on classroom instruction, an effect size of .28 (just over a quarter of a standard deviation) was estimated for year 1.

III.A.1.2 School Eligibility, Randomization, and Sample Size

To participate in the Striving Readers grant, schools had to meet the following eligibility criteria:

1. Be Title I eligible;
2. Serve a minimum of two grades (from 6,7,8);
3. Not already be using READ 180;
4. Be categorized as "in need of improvement" under *No Child Left Behind;* and
5. Serve a minimum of 25 eligible students.

Based on these criteria, 20 schools were initially eligible. After randomization, two schools were later merged (both in the control group), leaving 19 participating schools. For the targeted portion of the grant, these schools were randomly assigned to either the intervention or a control condition.

The randomization process utilized blocking variables as follows. Using the number of eligible students as the primary blocking variable, schools were divided into three groups: large schools (>100 eligible students), medium schools (51-100 eligible students), and small schools (25-50 eligible students). Within these three strata, schools were then sorted by number of years in need of improvement under *No Child Left Behind* and then by home language and special education status. Table 15 provides details of this blocking information.

Table 15. Blocking data used for random assignment

School name	No. Eligible students	Year INOI 05_06	No. Eligible non-English native language	# Eligible special ed	Strata	Group (1=T; 0=C)	
School 17	189	Yr5	43	80	1	1	Lrg schools *n*>100
School 7	98	Yr5	38	28	1	0	
School 6	107	Yr5	16	37	2	1	
School 1	108	Yr5	0	34	2	0	
School 11	182	Yr1	56	86	3	0	
School 16	90	Yr5	3	36	4	1	Med schools *n*>50
School 12	79	Yr5	1	43	4	0	
School 5	64	Yr5	3	37	5	1	
School 3	53	Yr5	12	30	5	0	
School 4	80	Yr4	0	40	6	1	
School 19	95	Yr3	0	68	6	0	
School 15	69	Yr1	34	26	7	1	
School 18	55	Yr1	11	26	7	0	
School 10	48	Yr4	1	5	8	1	Small schools *n*>25
School 2	39	Yr4	0	15	8	0	
School 14	37	Yr4	6	13	9	1	
School 9	33	Yr3	4	5	9	0	
School 8	27	Yr2	0	14	10	1	

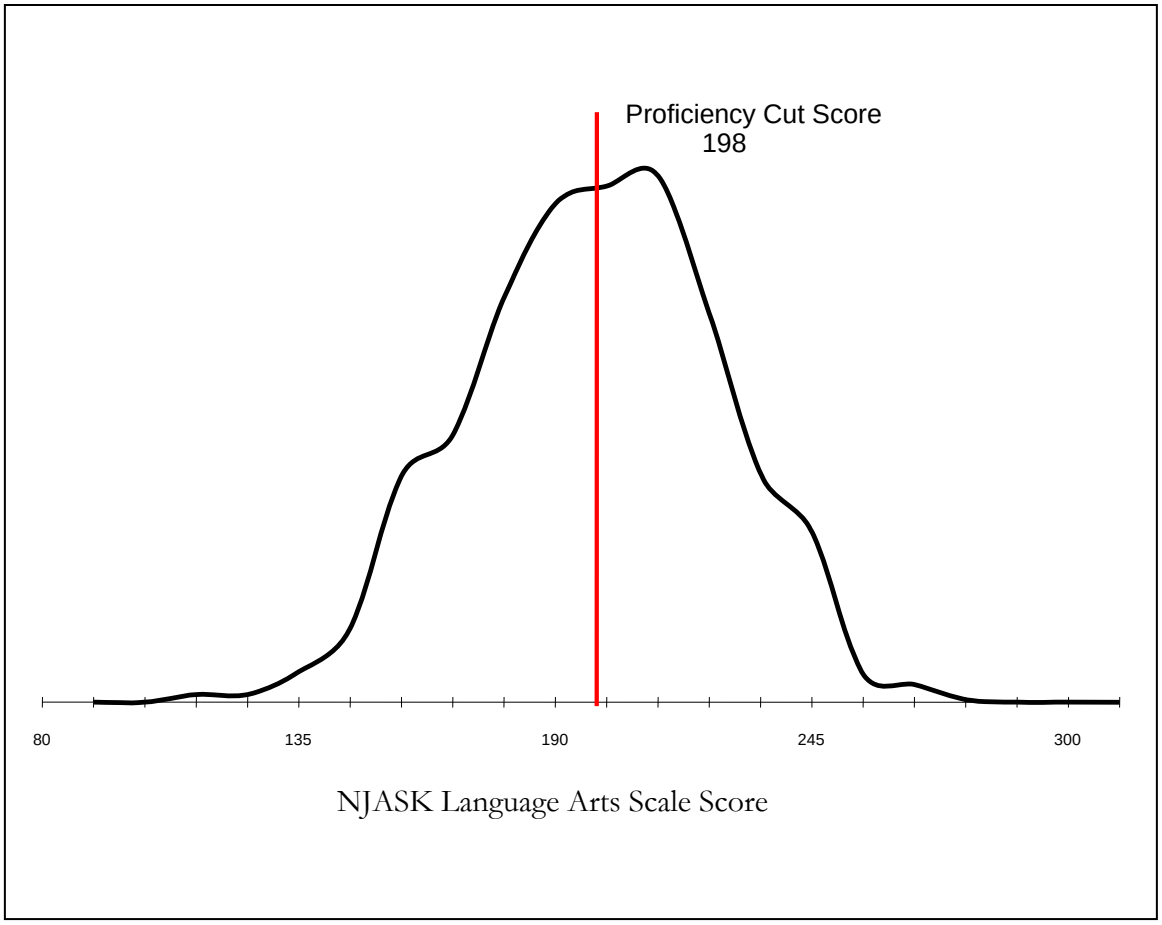
III.A.1.3 Student Eligibility and Sample Size

For students to be eligible for the targeted evaluation in year 1, they had to be enrolled in one of the eligible middle schools and be in grades 6, 7, or 8. Furthermore, student eligibility was based on their score on the reading subtest of the 2007 New Jersey Assessment of Skills and Knowledge (NJASK). In New Jersey, anyone scoring below a 200 is considered "partially proficient," which is the lowest category possible. Scores from 200 to 249 are "proficient," and scores above 249 are "advanced proficient." The cut-off scores for student eligibility were set by the district, based on one standard deviation from the norm. An example of student scores and the cut-off for eligibility are represented graphically in Figure 4. The same student eligibility requirements are used for students in both

treatment and control schools. They must score below the cut-off score on the NJASK to be included in the evaluation. The specific cut-off scores for each grade are:

- 6th grade = 198;
- 7th grade = 186; and
- 8th grade = 192.

Figure 4. Language Arts scale score frequency distribution for 19 evaluation schools (Grade 5)



In year 2, a second cohort of 6th graders was added. The cut-off score of 198 applied to the year 2 6th grade cohort as well. Transfer students without an NJASK score were not eligible to participate in Striving Readers.

In year 2, a total of 1,232 students participated in the evaluation; either in the treatment or in the control group. Of the 1,232 students, 648 attended treatment schools and 584 attended control schools.

III.A.2 Description of the Counterfactual in Year 1

Thirty-six language arts classrooms (grades 6, 7, and 8) were observed by trained Westat researchers in the spring of 2007. Twenty-one of these classrooms were READ 180 classrooms and the remainder were control classrooms.

Based on these observations, the number of students per classroom varied from 3 to 25. The average class size was 15. Using NPS data, there is a statistically significant difference in the class size of Language Arts classrooms by treatment group, as shown in Table 16.

Table 16. Class size comparison, treatment versus control

	N	Mean	sd	Sig diff?
Control classrooms	101	18.02	5.63	*
Treatment classrooms	43	15.70	5.09	

T-test significant at the .05 level.

Classrooms were composed almost equally of male and female students, with respective averages of 7.4 and 7.3. Only 3 of the 36 teachers observed were male, with the remainder being female teachers.

In terms of the physical environment, observers were asked to rate the classroom on a scale of 1 to 4, with 4 being the highest possible score. As Table 17 shows, all observed classrooms scored well on the availability of books in the classroom and the resources displayed on the classroom walls. However, as might be expected, the treatment classrooms had significantly more technology-related resources available than control classrooms.

Table 17. Physical environment of classrooms

Item	Treatment		Control		Sig diff?
	Mean	sd	Mean	sd	
Technology	3.57	.598	2.93	.884	*
Bulletin boards/walls (e.g., student samples word walls)	3.29	.717	3.33	.724	
Availability of books	3.52	.512	3.27	.799	

T-test significant at the .05 level.

Over the class period, observers were also asked to identify the literacy resources being used by students. Table 18 shows the results from these yes/no questions. Students in all classrooms utilized the same set of literacy resources, except in three cases: textbook use, use of computers, and use of audio equipment. In these cases, the treatment curriculum focuses heavily on these resources (rBooks, instructional software, and independent reading with CDs), so there is little surprise that treatment classrooms would score higher in these areas.

Table 18. Literacy resources used in observed classrooms

Item	Treatment		Control		Sig diff?
	% yes	sd	% yes	sd	
Reading or discussion of Novels/stories/poems	95%	.229	100%	.000	
Textbook	79%	.419	21%	.426	*
Articles	47%	.514	21%	.426	
Students all read same text	74%	.452	77%	.439	
Workbook/worksheets used	76%	.436	73%	.458	
Video/film/tv	42%	.507	14%	.363	
Notebooks/journals	81%	.402	93%	.258	
Computer use	95%	.218	20%	.414	*
Audio	80%	.410	7%	.258	*

T-test significant at the .05 level.

In terms of organization, climate, and culture, all classrooms scored very high on a 1 to 5 scale with 5 being the highest possible score. As a safe environment for struggling readers (that is, struggling readers risked making mistakes, got a lot of encouragement, and read without ridicule), treatment classrooms scored significantly higher than control classrooms, as shown in Table 19.

Table 19. Classroom organization

Item	Treatment		Control		Sig diff?
	Mean	sd	Mean	sd	
Classroom time well structured and transitions were well defined	4.48	.190	4.33	.211	
Participation of all students actively encouraged	4.38	.201	4.27	.248	
Safe environment for struggling readers	4.57	.130	4.07	.228	*

T-test significant at the .05 level.

Student groupings were recorded once every 10 minutes over the course of the classroom period. The time spent in each grouping is shown in Table 20 below. These data show that students in

treatment classrooms spend more time in small groups and working individually than students in control classrooms (who spent more time in whole class work):

Table 20. Average number of occasions that the following student groupings were observed

Groupings	Treatment		Control	
	Percent	sd	Percent	sd
Whole class	25.73	1.56	47.30	2.26
Small group	44.81	1.35	30.41	2.00
Individual	29.46	2.91	15.54	2.39

III.A.3 Data Collection Plan

III.A.3.1 Student Measures

To determine the impact of the targeted intervention on students, we are using the scale score results of the Vocabulary, Reading Comprehension, and Language Arts subtests of the Stanford Achievement Test, 10th Edition (SAT 10).[11] The SAT 10 using vertical scaling and norm-referenced scores to ensure scale scores can be directly compared when students are assessed with different instruments at different times, and students' scores can also be compared with a larger national sample of scores on the same tests.

The vocabulary subtest includes concepts such as synonyms, multiple-meaning words, and use of context clues to decipher the meaning of unknown words. The Reading Comprehension assesses students' reading achievement using text read for enjoyment (e.g., fiction, poetry, etc.), text read for informational or expository purposes (e.g., science, textbook material, etc.), and everyday functional text (e.g., directions, labels, forms, etc.). This subtest also measures students' ability to initially understand explicit details in a passage, interpret information in a passage, critically analyze and evaluate information in a passage, and apply appropriate reading strategies.

The Language Arts subtest is divided into three sections. The first focuses on language mechanics, including capitalization, punctuation, and usage. The second section focuses on language expression, including writing strategies and sentence structure knowledge. The final section of the Language Arts subtest also focuses on language expression, but on a higher level than the previous section.

[11] Abbreviated battery.

Students analyze written passages for the assessment of how well they recognize extraneous information and descriptive language and the combining of simplistic sentences.

Data on the reliability of the SAT 10 are restricted to KR-20 internal-consistency estimates. The reliability for the abbreviated Reading subtest is .89. The SAT 10 thus appears to hold sufficient reliability to support data inferences about the performance of groups of students.

Along with the SAT 10 tests, the results of the New Jersey Assessment of Skills and Knowledge Language Arts Literacy (LAL) test are also examined as a measure of student learning. The NJASK is the state's standardized exam, typically given near the end of the school year, and student-level results were reported as scale scores. The LAL section of the exam is composed of both literacy/reading and writing sections. State test data were not available for all grades, limiting the number of analysis groups examined using the NJASK results.

In addition to the SAT 10, we also estimated whether the treatment had an effect on student attendance. From district records, we constructed a student-level variable that was the number of unexcused absences from school for each student for the school year.

III.A.3.2 Schedule of Data Collection in Year 2

Data collection for year 2 involved testing students in grades 6, 7, and 8 from May 12 to June 3, 2008. Four weeks prior to data collection, 13 field assessors attended a 2-day training program in Newark, NJ, conducted by Westat. Training topics covered the study description and background, administrative procedures, professional conduct, confidentiality, student testing protocols, classroom observation protocols, and classroom fidelity protocols. The goals of the training were to:

- Increase the accuracy, quality and relevance of collected data;
- Standardize the quality of data collection techniques and procedures; and
- Provide explicit procedures for assessors to follow.

After training, SAT 10 testing materials were sent to each assessor. Approximately 4 weeks after training, assessors began testing all eligible students in grades 6, 7, and 8. The initial testing occurred over a 3-week period. Field assessors also conducted quality assurance checks of each student answer sheet to verify completeness and demographic information and to remove stray marks

before scoring by Pearson Assessment (formerly Harcourt Assessment). Table 21 provides an overview of the data collection schedule for spring 2008.

Table 21. Data collection schedule for year 2

Data collection activity	Date
Assessor training	April 10-11, 2008
Mail data collection materials to assessors	May 8-9, 2008
Conduct test administration	May 12-28,2008
Make up testing	May 29 -June 3, 2008
Answer sheets sent to Pearson	June 11, 2008

III.A.4 Summary of Analytic Approach

III.A.4.1 Model Specifications

To determine the impact of READ 180, an intent-to-treat (ITT) analysis was conducted based on cross-sectional data, using a multilevel software package (HLM). A linear two-level model with student and school as the two levels was used. At the first level of the model, achievement for students within schools was predicted by a series of student characteristics. These student covariates were fixed across schools with no interactions. For the attendance outcome, a Poisson distribution was used (the outcome is a count of days absent during the school year). An example of this HLM output is provided in Appendix C.

III.A.4.2 Selection of Analytic Variables

The student outcomes for the targeted intervention are the three reading achievement subscores from the SAT 10 (Reading Comprehension, Vocabulary, and Language Arts)), NJASK Language Arts Literacy scale scores, and school attendance (the number of unexcused absences). A number of variables were used as covariates in the cross-sectional design. Only a limited set of covariates was used because validity can be compromised if the models have the wrong structure or are poorly estimated. In accordance with the recommendations of the Committee for Proprietary Medicinal Products (2004), we identified all covariates prior to breaking the blind. These covariates are shown in Table 22. The categorical variables were dummy coded, and all variables (except the treatment indicator) were centered on the grand mean.

Table 22. Covariates for impact analysis

	Data format	Coding
Entered at school level		
Treatment assignment	Dichotomous	1=Treatment 0=Control
Number of eligible students	Continuous	
Year in need of improvement	Count	1=1st year 2=2nd year 3=3rd year 4=4th year 5=5th year
Number of eligible ELL students	Continuous	
Number of eligible Spec Ed students	Continuous	
Mean school reading score (NJASK & GEPA)	Continuous	
Entered at student level		
Grade	Categorical	6=6th grade 7=7th grade 8=8th grade
Special education identification	Dichotomous	1=yes 0=no
Free lunch eligibility	Dichotomous	1=yes 0=no
English Language Learners	Dichotomous	1=yes 0=no
Gender	Dichotomous	1=yes 0=no
African-American	Dichotomous	1=yes 0=no
Hispanic	Dichotomous	1=yes 0=no
Baseline reading score (NJASK & GEPA)	Continuous	
Use of supplementary education services provider	Dichotomous	1=yes 0=no

III.A.4.3 Analysis groups

Students were divided into five analysis groups in order to examine the overall impact of one and two years of treatment as shown in Table 23. The first analytic group included all students who received 1 year of treatment. The second group included only 6th grade students who received one year of treatment. The third and fourth groups included the 7th and 8th grade students separately who could have received up to 2 years of treatment. The final group consists of the combined 7th and 8th grade students.

Table 23. Analysis groups by year and grade

Analytic Group	One Year of Treatment				Two Years of Treatment	
	Year 1 6th grade	Year 1 7th grade	Year 1 8th grade	Year 2 6th grade	Year 2 7th grade	Year 2 8th grade
(1) Availability of 1 year of treatment for 6th, 7th, & 8th graders (combined)	✓	✓	✓	✓		
(2) Availability of 1 year of treatment on 6th graders	✓			✓		
(3) Availability of 2 years of treatment for 7th graders					✓	
(4) Availability of 2 years of treatment for 8th graders						✓
(5) Availability of 2 years of treatment for 7th & 8th graders (combined)					✓	✓

III.A.4.4 Missing Data

There were some missing data for two of the covariates listed in Table 22 gender and free and reduced lunch. However, the amount of missing data was minimal, so no imputation was conducted. There were some missing data for student outcomes as shown in Table 24.[12] Overall, 93 percent of eligible students in year 2 took the SAT 10 (544 control students and 602 treatment students). Year 2 students who did not have SAT 10 results in both treatment and control schools were compared and no statistically significant difference was found on baseline NJASK scores ($t(115) = 1.20$, $p = .23$).

III.A.4.5 Subgroup Analyses

In order to examine the impact of treatment on specific subpopulations of students, students in each analytic group were divided into the following five subgroups:

1. Female students;
2. Male students;
3. African-American students;

[12] Consistent with our analysis plan, we did not impute missing data for outcome variables.

4. Hispanic students; and

5. Special education students.

Table 24. Missing data for student outcomes, year 2

Analytic Group	Outcome variables	Total number tested	Number of missing	Missing %
(1) Availability of 1 year of treatment for 6th, 7th, and 8th graders (combined).	Comprehension	1772	182	10.3%
	Vocabulary	1772	276	15.6%
	Language arts	1772	312	17.6%
	Attendance	1772	62	3.5%
(2) Availability of 1 year of treatment on 6th graders.	Comprehension	904	94	10.4%
	Vocabulary	904	128	14.2%
	Language arts	904	152	16.8%
	Attendance	904	60	6.6%
(3) Availability of 2 years of treatment for 7th graders	Comprehension	444	28	6.3%
	Vocabulary	444	35	7.9%
	Language arts	444	38	8.6%
	Attendance	444	67	15.1%
(4) Availability of 2 years of treatment for 8th graders	Comprehension	373	22	5.9%
	Vocabulary	373	23	6.2%
	Language arts	373	27	7.2%
	Attendance	373	96	25.7%
(5) Availability of 2 years of treatment for 7th and 8th graders (combined)	Comprehension	817	50	6.1%
	Vocabulary	817	58	7.1%
	Language arts	817	65	8.0%
	Attendance	817	163	20.0%

Including English language learners students as a separate subgroup for analyses was considered. However, there were too few students who fit this criterion to conduct meaningful analyses. Also, subgroups were not used for analyses of NJASK score comparisons.

III.B Description of the First and Second Year Samples

III.B.1 Characteristics of Schools and Students

III.B.1.1 Schools

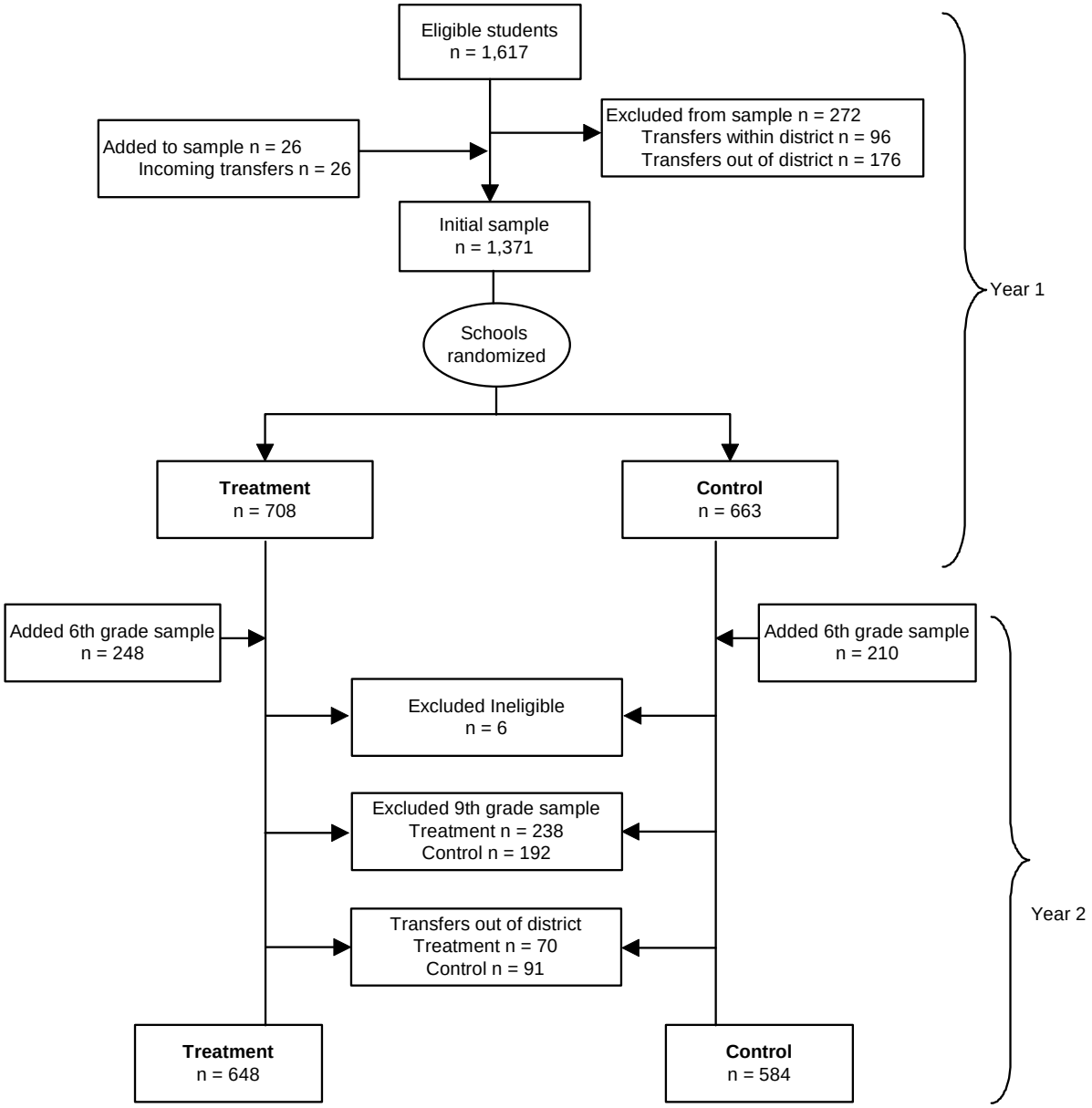
Nineteen middle schools were selected for the targeted intervention in Year 1. Of these schools, 10 were randomly assigned to receive READ 180, and 9 were randomly assigned to the control condition. All schools remained part of the sample in year 2.

III.B.1.2 Students

Students in 6th or 7th grade in year 1 remained in the sample in year 2 (they became the 7th and 8th graders). The 8th graders from year 1 moved into the 9th grade in year 2, and were therefore dropped from the evaluation. A fresh cohort of 6th graders was added to the sample in year 2. This evolution of the student sample is shown in Figure 5.

The attrition rate of students between the first and second years of the evaluation was 8.5 percent from the treatment group and 11.9 percent of the control group. Nonrandom attrition of individuals from randomly assigned groups can cause the groups to no longer be comparable and can have the same effects as self-selection bias, but during the experiment rather than before. The What Works Clearinghouse (2008) has established benchmarks for tolerance levels of attrition bias. With an overall attrition rate of 10.1 percent and a differential attrition rate of 3.4 percent the potential attrition bias from year 1 to year 2 of the sample is quite small, less than 0.05 effect size units. In short, the attrition rates are low enough that effect size estimates of outcomes are unlikely to be biased based on the What Works Clearinghouse guidelines.

Figure 5. Flow of students in the targeted intervention[a]



[a] The numbers in this report differ from NPS' year 2 APR report. For evaluation purposes, Westat considers students as they were originally assigned to a condition while NPS summarizes students' current school.

The demographics of the 1,232 students eligible for the targeted intervention in year 2 are similar to that of the students in Newark as a whole in several respects. Most of the Striving Readers students are African-American (57 percent) or Hispanic (41 percent), compared to 55 and 43 percent in the district as a whole. Moreover, 8 percent of Striving Readers students were English language learners, compared to 8 percent in the district as a whole. More detailed demographic information is provided in Table 25.

Table 25. Characteristics of year 2 students in the targeted intervention, by treatment status

Number (column %)	Students in treatment schools	Students in control schools	All students
Total number of students	648 (53%)	584 (47%)	1,232
Average no. of students per school	64.8	64.9	64.8
Grade fall 2006			
6th grade	226 (35%)	179 (31%)	405(33%)
7th grade	233 (36%)	217 (37%)	450 (36%)
8th grade	189 (29%	188 (32%)	377 (31%)
Gender			
Male	361 (56%)	300 (51%)	661 (54%)
Female	287 (44%)	284 (49%)	571 (46%)
Economically disadvantaged	385 (59%)	335 (57%)	720 (58%)
English language learners	54 (8%)	41 (7%)	95 (8%)
Special education	287 (44%)	236 (40%)	523 (42%)
Race/ethnicity			
African American	367 (57%)	315 (54%)	682 (55%)
Hispanic	268 (41%)	257 (44%)	525 (43%)
White	4 (1%)	9 (1%)	13 (1%)
Other	9 (1%)	3 (1%)	12 (1%)

Descriptive information was also collected for student attendance. Overall in year 2 students missed an average of 26.67 days of school as compared to 23.2 average missed days in year 1 (see table 26). There were no significant differences in year 2 between treatment and control schools for number of days missed ($t(1005)= 0.019, p = .99$).

Table 26 Average days of school missed in year 2.

	Average number of days missed
Overall	26.67
Control	26.68
Treatment	26.66

III.B.2 Tests of Equivalence for Treatment and Control Schools

Equivalence between treatment and control schools was tested in years 1 and 2. In year 1, of the seven variables tested for balance, one variable demonstrated a significant difference between treatment and control groups. As shown in Table 27, treatment schools had significantly more students eligible for free and reduced-price lunch than control schools. However, this variable was

incorporated into the analysis model as a student-level covariate and should not influence the impact estimates.

These balance tests were calculated using SAS PROC MIXED to take into account the clustering of students within schools.

Table 27. Balance test for treatment and control groups—year 1

Variable	Control Mean	Treatment Mean	DF	t Value	Pr > |t|
Males	54.75%	57.20%	1368	-0.91	0.361
Eligible free/reduced lunch	83.86%	91.38%	1368	-4.27	<.0001
English language learner	3.34%	2.07%	1368	0.92	0.357
Special Education student	29.08%	28.33%	1368	0.28	0.776
Rec'd supplemental reading instruct	20.42%	21.49%	1368	-0.57	0.570
African-American	71.13%	70.07%	1368	0.40	0.688
Baseline state assessment score	176.63	177.28	1368	-0.74	0.458

In year 2, none of the eight variables tested for balance demonstrated a significant difference between treatment and control groups.

III.C Impacts on Students

Impacts on students in each of the five analysis groups are presented in this section. Two aspects of the analytic results are discussed for each group. The first is whether any of the results are statistically significant at the .05 level. The second is whether any of the results reach an effect size threshold of .20. It has been noted that when considering the practical importance of effect sizes, the context of the type of outcome being measured and the sample being studied should be taken into account (Bloom, Hill, Black, & Lipsey, 2008). Effect sizes were calculated using Glass's Δ (Rosenthal, 1994) and represent a change in standard deviation due to being part of the treatment condition. For example, an effect size of .25 indicates that average scores for students in the treatment group were a quarter of a standard deviation (.25) higher than students' scores in the control group. (See Appendix D for a table of standard deviations used to calculate effect sizes).

Following the summary of the findings, tables are provided that include means for treatment and control groups, as well as effect sizes and p-values. Furthermore, detailed tables of model results are included in Appendix D.

III.C.1 Analysis Group 1

Analysis group 1 combines all students who had 1 year of potential exposure to the treatment. This is the 6th, 7th, and 8th graders from the year 1 sample, and the new cohort of 6th graders from the year 2 sample. The goal of this analysis group was to determine if treatment students who had (potentially) 1 year of READ 180 outperformed students in the control group. All grades were combined to provide the largest possible sample size, thus increasing power. Despite these efforts, no significant effects were found for this group as a whole. Moreover, effect sizes were also small, as shown in Table 28.

Table 28. Analysis group 1 overall—impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
Attendance	24.95	26.75	24.15	24.20	0.06	0.003	0.477
Vocabulary	614.93	618.31	615.44	617.96	2.52	0.078	0.161
Comprehension	611.76	612.70	610.57	612.66	2.09	0.072	0.324
Language Arts	601.74	601.91	601.22	602.66	1.44	0.053	0.376
Number of students	838	934					
Number of schools	9	10					

Subgroup analyses were then performed on this analytic group. Significant treatment effects were found for female students on the Language Arts subtest. Females with the availability of 1 year of treatment scored higher on the Language Arts subtest of the SAT 10 than females in the control group. Additionally, a significant difference was found for Special Education students. Special education students in the targeted intervention outperformed control students in the Vocabulary subtest. However both effect sizes of 0.134 and 0.150, respectively, fall below the usual definition of small.[13] That is, while the results have been found to be statistically significant, they may still be too small to be of practical significance. The results of the subgroup analyses for analysis group 1 are provided in Tables 29-33, below.

[13] Cohen (1977) described effect sizes of 0.20 as small, 0.50 as medium, and 0.80 as large.

Table 29. Analysis group 1 Females—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	24.73	27.16	22.88	22.96	0.08	0.004	0.396
Vocabulary	612.42	618.48	614.01	617.74	3.73	0.116	0.212
Comprehension	612.2	615.58	611.71	615.48	3.77	0.130	0.115
Language Arts	604.77	606.98	604.47	608.12	3.66	0.134	0.017
Number of students	380	399					
Number of schools	9	10					

Table 30. Analysis group 1 Males—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	25.14	26.43	25.08	25.11	0.03	0.001	0.697
Vocabulary	617.08	618.27	616.43	618.52	2.09	0.065	0.283
Comprehension	611.37	610.51	609.81	610.61	0.81	0.028	0.729
Language Arts	599.12	598.11	599.17	598.72	-0.46	-0.017	0.851
Number of students	458	534					
Number of schools	9	10					

Table 31. Analysis group 1 African-American—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	24.51	27.74	24.50	24.62	0.11	0.005	0.197
Vocabulary	615.33	619.81	616.45	619.27	2.82	0.088	0.169
Comprehension	611.38	613.02	610.86	612.95	2.08	0.072	0.435
Language Arts	601.06	602.57	600.40	602.80	2.40	0.088	0.167
Number of students	486	525					
Number of schools	9	10					

Table 32. Analysis group 1 Hispanic—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	25.48	25.79	20.40	20.54	0.14	0.006	0.229
Vocabulary	614.85	616.53	617.72	617.86	0.14	0.004	0.967
Comprehension	612.76	612.66	614.11	616.07	1.96	0.068	0.561
Language Arts	602.8	601.32	603.22	603.53	0.31	0.011	0.934
Number of students	339	392					
Number of schools	8	9					

Table 33. Analysis group 1 Special Education—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.72	25.47	24.93	24.97	0.04	0.002	0.695
Vocabulary	606.09	611.04	605.99	610.80	4.81	0.150	0.041
Comprehension	604.3	604.27	602.61	604.84	2.23	0.077	0.397
Language Arts	591.74	593.06	590.88	593.28	2.40	0.088	0.231
Number of students	339	389					
Number of schools	9	10					

III.C.2 Analysis Group 2

Analysis group 2 comprises the 6th grade cohort from year 1 combined with the new 6th grade cohort from year 2. This doubles the sample size of the 6th grade analysis and provides a better chance of finding an effect for this grade, if it exists.

However, no statistically significant treatment effects were found for 6th graders, even when subgroup analyses were performed. Moreover, no overall effect size met the .20 cut off, as shown in Table 34, below.

Table 34. Analysis group 2 Overall—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.52	22.59	23.30	23.25	-0.05	-0.002	0.709
Vocabulary	600.08	603.69	600.29	603.35	3.06	0.107	0.152
Comprehension	598.28	600.73	598.10	600.96	2.86	0.112	0.285
Language Arts	589.68	591.96	590.12	590.17	0.05	0.002	0.984
Number of students	415	489					
Number of schools	9	10					

Subgroup analyses were then performed on this analytic group. Despite the lack of statistically significant findings, the READ 180 curriculum increased the average Hispanic student's Language Arts subtest by an effect size of 0.318, meaning average scores for Hispanic students in the treatment group were .318 standard deviations above students' scores from the control group. Although not statistically significant, this finding may have some important practical implications. Tables 35-39 show the results of the subgroup analyses for group 2.

Table 35. Analysis group 2 Female—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	22.97	23.08	22.09	22.08	0.00	0.000	0.969
Vocabulary	597.65	602.8	599.72	603.35	3.63	0.126	0.288
Comprehension	600.36	603.53	599.77	603.93	4.16	0.162	0.105
Language Arts	594.42	598.55	594.50	591.96	-2.54	-0.106	0.320
Number of students	196	211					
Number of schools	9	10					

Table 36. Analysis group 2 Male—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	24.00	22.16	24.56	24.46	-0.10	-0.005	0.468
Vocabulary	602.26	604.46	601.37	603.71	2.34	0.081	0.381
Comprehension	596.38	598.51	596.80	598.48	1.68	0.066	0.609
Language Arts	585.41	586.90	586.69	589.09	2.40	0.101	0.389
Number of students	219	277					

Number of schools	9	10

Table 37. Analysis group 2 African-American—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.47	23.51	21.51	21.57	0.05	0.003	0.747
Vocabulary	600.13	605.05	600.82	605.74	4.92	0.171	0.129
Comprehension	597.7	600.95	598.59	601.64	3.05	0.119	0.435
Language Arts	590.26	593.1	589.51	589.11	-0.40	-0.017	0.886
Number of students	233	266					
Number of schools	9	10					

Table 38. Analysis group 2 Hispanic—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.29	21.48	20.48	20.42	-0.06	-0.003	0.738
Vocabulary	599.85	602.28	603.91	601.19	-2.73	-0.095	0.540
Comprehension	599.02	600.95	600.24	603.61	3.37	0.132	0.330
Language Arts	588.85	590.62	594.98	602.57	7.58	0.318	0.125
Number of students	173	213					
Number of schools	7	9					

Table 39. Analysis group 2 Special Education—Impact of READ 180

Outcome	Unadjusted Means		Regression-adjusted Means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.38	23.24	26.64	26.53	-0.12	-0.006	0.417
Vocabulary	588.90	595.35	590.51	595.96	5.46	0.190	0.124
Comprehension	590.20	594.04	590.77	595.28	4.51	0.176	0.203
Language Arts	578.21	583.68	581.73	581.94	0.21	0.009	0.958
Number of students	172	229					
Number of schools	9	10					

III.C.3 Analysis Group 3

Analysis group 3 comprises the 7th graders in year 2 (who, in year 1 were 6th graders). The students from this analysis group attending treatment schools have had the opportunity to access the READ 180 curriculum for 2 years. It was hypothesized that after 2 years of exposure to the READ 180, treatment effects would be found. However, no overall effects were apparent, either in terms of p-values or effect sizes, as shown in Table 40.

Table 40. Analysis group 3 Overall—Impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
Attendance	24.53	27.50	21.40	21.57	0.18	0.008	0.166
Vocabulary	621.94	625.92	621.01	624.69	3.68	0.142	0.153
Comprehension	616.59	618.5	615.73	618.12	2.40	0.090	0.422
Language Arts	609.75	606.78	608.76	607.10	-1.66	-0.061	0.564
Number of students	210	234					
Number of schools	9	10					

Despite the lack of overall effects for this analysis group, subgroup differences were found. Significant treatment effects were found for males on the Vocabulary subtest of the SAT 10 and for special education students on the Comprehension subtest. In addition to being statistically significant, both of these findings have effect sizes of 0.338 and 0.374, respectively.

A number of subgroup analyses found effect sizes greater than .20. In addition to the male finding on the Vocabulary subtest mentioned above, males in the treatment group also scored a quarter of a standard deviation higher than males in the control group.

Special education students in the treatment group also performed better than special education students in the control group by .234 standard deviations. Last, while Hispanic 7th grade results were not statistically significant, this group had effect sizes of greater than .20 on all three SAT 10 subtests.

It is important to note that a negative treatment effect was found for females on the Language Arts subtest. This effect was not statistically significant (p-value of 0.076), but the effect size is -0.242. Females in the treatment group had lower scores on the Language Arts subtest than females in the control group.

Statistically significant findings, as well as effect sizes greater than 0.20 for analysis group 3 are summarized in Table 41. The READ 180 curriculum increased the average male, Hispanic, and special education students' Vocabulary and Comprehension subtests by effect sizes of 0.210 or more. The average Hispanic student Language Arts subtest achievement increases by an effect size of 0.300.

Table 41. Summary of subgroup findings for analysis group 3

	Vocabulary		Comprehension		Language Arts	
Subgroup	ES	Sig	ES	Sig	ES	Sig
Male	0.338	*	0.247			
Hispanic	0.210		0.213		0.300	
Special education	0.234		0.374	*		
Female					-0.242	

The full subgroup results are presented in Tables 42-46.

Table 42. Analysis group 3 Female—Impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
Attendance	24.16	27.26	20.28	20.47	0.18	0.009	0.165
Vocabulary	623.54	626.07	622.71	622.23	-0.48	-0.019	0.853
Comprehension	621.83	621.34	621.32	618.60	-2.72	-0.102	0.126
Language Arts	615.84	612.50	616.51	609.86	-6.64	-0.242	0.076
Number of students	105	105					
Number of schools	9	10					

Table 43. Analysis group 3 Male—Impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
Attendance	24.91	27.70	21.97	22.15	0.17	0.008	0.240
Vocabulary	620.28	625.79	617.92	626.67	8.75	0.338	0.019
Comprehension	611.20	616.21	610.51	617.09	6.58	0.247	0.159
Language Arts	603.33	602.27	602.15	603.45	1.30	0.047	0.707
Number of students	105	129					
Number of schools	9	10					

Table 44. Analysis group 3 African-American—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.69	28.91	24.21	24.37	0.15	0.007	0.407
Vocabulary	619.92	625.97	621.47	625.93	4.46	0.172	0.247
Comprehension	613.99	620.18	616.76	620.29	3.52	0.133	0.514
Language Arts	605.66	604.2	608.59	605.68	-2.91	-0.106	0.530
Number of students	110	128					
Number of schools	9	10					

Table 45. Analysis group 3 Hispanic—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	25.68	25.46	25.72	25.40	-0.33	-0.015	0.200
Vocabulary	624.68	625.31	621.69	627.14	5.45	0.210	0.540
Comprehension	619.85	616.00	614.26	619.93	5.67	0.213	0.274
Language Arts	614.55	610.26	605.31	613.53	8.22	0.300	0.286
Number of students	97	103					
Number of schools	6	9					

Table 46. Analysis group 3 Special Education—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	23.28	29.03	24.97	25.11	0.14	0.007	0.301
Vocabulary	614.13	618.19	612.10	618.16	6.07	0.234	0.114
Comprehension	607.77	612.16	604.85	614.80	9.95	0.374	0.004
Language Arts	599.45	597.01	598.62	598.24	-0.37	-0.014	0.938
Number of students	89	96					
Number of schools	9	9					

III.C.4 Analysis Group 4

Analysis group 4 comprises the 8th graders in year 2 (who in year 1 were 7th graders). The students from this analysis group attending treatment schools have had the opportunity to access the READ

180 curriculum for 2 years. It was hypothesized that after 2 years of exposure to the READ 180, treatment effects would be found. However, no overall effects were apparent, either in terms of p-values or effect sizes, as shown in Table 47.

Table 47. Analysis group 4 Overall—Impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
Attendance	30.95	28.04	27.12	27.09	-0.03	-0.001	0.815
Vocabulary	642.18	640.98	642.56	642.09	-0.47	-0.017	0.859
Comprehension	639.05	640.08	638.20	641.49	3.29	0.139	0.135
Language Arts	623.33	623.38	620.96	623.43	2.46	0.106	0.402
Number of students	185	188					
Number of schools	9	10					

When examining the impact of the availability of up to 2 years of treatment for specific groups of students in this analysis group, significant effects were found for females and Hispanic students. Availability of treatment negatively affected females' attendance significantly, but positively affected Hispanic students' Language Arts scores. However, the effect size for female attendance is 0.009, which may indicate that this is a spurious finding. The effect size for Hispanic students for Language Arts is 0.466.

When examining the effect sizes, Hispanic students in the treatment group achieved scores on all three subtests that were 0.200 or greater than control group students. Male students' Language Arts subtest achievement had an effect size of 0.217. Special education students' Comprehension achievement had an effect size of 0.244. Female results again had a negative (although not statistically significant) effect, with an effect size of -.224 for Vocabulary.

For each of the subgroup analyses, the significant findings and effect sizes greater than .20 are summarized in Table 48, below.

Table 48. Summary of subgroup findings for analysis group 4

	Attendance		Vocabulary		Comprehension		Language Arts	
Subgroup	ES	Sig	ES	Sig	ES	Sig	ES	Sig
Male							0.217	
Hispanic			0.234		0.204		0.466	*
Special education					0.244			
Female		*	-0.224					

The full subgroup results are presented in Tables 49-53.

Table 49. Analysis group 4 Female—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	27.49	31.06	21.14	21.39	0.25	0.009	0.012
Vocabulary	643.62	638.37	646.71	640.63	-6.08	-0.224	0.316
Comprehension	643.09	642.39	642.74	645.79	3.05	0.129	0.254
Language Arts	627.94	626.11	626.44	627.70	1.26	0.054	0.631
Number of students	96	84					
Number of schools	9	10					

Table 50. Analysis group 4 Male—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	34.4	25.47	30.94	30.74	-0.21	-0.007	0.340
Vocabulary	640.6	643.1	638.43	643.21	4.78	0.176	0.253
Comprehension	634.61	638.22	633.94	637.68	3.74	0.158	0.171
Language Arts	618.33	621.14	615.72	620.74	5.02	0.217	0.154
Number of students	89	104					
Number of schools	9	10					

Table 51. Analysis group 4 African-American—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	30.56	23.28	27.71	27.47	-0.25	-0.009	0.277
Vocabulary	643.72	640.58	644.60	641.31	-3.29	-0.121	0.414
Comprehension	639.73	639.36	639.61	639.96	0.35	0.015	0.915
Language Arts	622.89	621.79	621.40	622.31	0.92	0.040	0.860
Number of students	105	108					
Number of schools	9	10					

Table 52. Analysis group 4 Hispanic—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	32.09	38.94	29.12	29.43	0.30	0.011	0.342
Vocabulary	640.45	641.51	639.66	646.01	6.35	0.234	0.315
Comprehension	637.88	641.41	638.43	643.27	4.84	0.204	0.196
Language Arts	623.95	625.83	619.74	630.53	10.79	0.466	0.005
Number of students	77	77					
Number of schools	7	7					

Table 53. Analysis group 4 Special Education—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	31.15	31.34	37.74	37.47	-0.27	-0.010	0.294
Vocabulary	633.33	632.28	630.53	634.61	4.08	0.151	0.566
Comprehension	629.51	631.18	628.57	634.36	5.79	0.244	0.325
Language Arts	613.35	612.98	612.88	616.19	3.31	0.143	0.649
Number of students	66	72					
Number of schools	8	9					

III.C.5 Analysis Group 5

Analysis group 5 comprises groups 3 and 4 combined. That is, the 7th and 8th graders in year 2 (who in year 1 were 6th and 7th graders). As groups 3 and 4 had no overall effects, it is not surprising that group 5 had no overall effects, as shown in Table 54.

Table 54. Analysis group 5 Overall—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	27.47	27.7	23.80	23.90	0.10	0.004	0.249
Vocabulary	631.46	632.73	630.62	632.58	1.96	0.069	0.337
Comprehension	627.12	628.15	625.81	628.58	2.77	0.100	0.196
Language Arts	616.13	614.27	614.11	614.16	0.05	0.002	0.984
Number of students	395	422					
Number of schools	9	10					

In subgroup analysis, significant treatment effects were found in females' attendance, male Vocabulary scores, and Hispanic Language Arts scores. Females in the treatment condition had more absences than females in the control group, males in the treatment group had higher Vocabulary scores than males in the control group, and Hispanic students in the treatment group had higher Language Arts scores than Hispanics in the control group.

The effect size for female attendance was 0.009, below the level of 0.200 guidelines for a small effect size. Small effect sizes for this analysis group are summarized in Table 55. The average male students' Vocabulary and Comprehension achievement increased by an effect size of 0.210 or more. Hispanic students' Vocabulary and Language Arts achievement increased by an effect size of 0.288 or more. Special education students' Comprehension achievement increased by an effect size of 0.237.

For each of the subgroup analyses, the significant findings and effect sizes greater than .20 are summarized in Table 55, below.

Table 55. Summary of subgroup findings for analysis group 5

	Attendance		Vocabulary		Comprehension		Language Arts	
Subgroup	**ES**	**Sig**	**ES**	**Sig**	**ES**	**Sig**	**ES**	**Sig**
Male			0.227	*	0.210			
Hispanic			0.352				0.288	
Special education					0.237	*		
Female		*						

The full subgroup results are presented in Tables 56-60.

Table 56. Analysis group 5 Female—Impact of READ 180

	Unadjusted means		Regression-adjusted means				
Outcome	**Control**	**Treatment**	**Control**	**Treatment**	**Estimated impact**	**Effect size**	***p*-value**
Attendance	27.70	28.71	20.69	20.93	0.23	0.009	0.019
Vocabulary	632.73	631.62	633.54	631.72	-1.82	-0.064	0.356
Comprehension	628.15	630.73	631.48	631.26	-0.22	-0.008	0.886
Language Arts	614.27	618.72	620.82	618.28	-2.54	-0.096	0.320
Number of students	201	189					
Number of schools	9	10					

Table 57. Analysis group 5 Male—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	28.71	26.86	25.98	25.96	-0.02	-0.001	0.835
Vocabulary	631.62	633.64	627.38	633.81	6.43	0.227	0.049
Comprehension	630.73	626.06	620.49	626.28	5.79	0.210	0.063
Language Arts	618.72	610.69	608.07	610.47	2.40	0.091	0.389
Number of students	194	233					
Number of schools	9	10					

Table 58. Analysis group 5 African-American—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	27.01	26.58	26.16	26.13	-0.02	-0.001	0.844
Vocabulary	631.34	632.81	632.07	632.96	0.89	0.032	0.676
Comprehension	626.34	629.04	626.68	629.39	2.70	0.098	0.285
Language Arts	613.97	612.47	614.02	613.62	-0.40	-0.015	0.886
Number of students	215	236					
Number of schools	9	10					

Table 59. Analysis group 5 Hispanic—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	28.43	29.74	28.55	28.42	-0.13	-0.005	0.486
Vocabulary	631.9	632.28	627.03	636.98	9.95	0.352	0.168
Comprehension	628.05	626.8	624.21	628.78	4.57	0.165	0.192
Language Arts	618.82	616.87	611.30	618.88	7.58	0.288	0.125
Number of students	174	180					
Number of schools	7	9					

Table 60. Analysis group 5 Special Education—Impact of READ 180

Outcome	Unadjusted means		Regression-adjusted means		Estimated impact	Effect size	*p*-value
	Control	Treatment	Control	Treatment			
Attendance	26.60	29.88	27.58	27.59	0.01	0.000	0.938
Vocabulary	622.26	624.1	619.59	625.07	5.48	0.194	0.161
Comprehension	616.98	620.09	615.42	621.96	6.54	0.237	0.021
Language Arts	605.41	603.65	604.60	604.82	0.21	0.008	0.958
Number of students	155	168					
Number of schools	9	9					

III.C.6 Impacts on Student Attendance: Additional Analyses

Originally, subgroup analyses of the student attendance data yielded findings contrary to hypotheses. Particularly in the female subgroup of analysis groups 4 and 5, negative impacts of READ 180 on females' attendance were found. Eighth grade females with 2 years of exposure in READ 180 and 7th and 8th grade females with 2 years of READ 180 exposure missed significantly more days of school than females in control schools. Further analyses revealed that one school in the treatment group had a large amount of missing data for the attendance outcome and was an outlier. Imputation of attendance data for this school skewed the overall rate of student absences for the control group. Therefore, additional analyses were conducted after removing this schools' attendance data.

With the outlier school removed, significant differences in female student attendance were still found. In analysis groups 3 (7th grade, 2 years of READ 180), 4 (8th grade, 2 years of READ 180 exposure), and 5 (7th and 8th grades, 2 years of READ 180 exposure) female students in treatment schools had more absences than female students in control schools. These findings are still contrary to the original hypotheses. The results are presented in Tables 61 through 65. Detailed tables of model results are included in Appendix D.

Table 61. Analysis group 1—Impact of READ 180 on attendance, outlier school removed

Subgroup	SD	Mean control	Mean treatment	Estimated impact	Effect size	*p*-value
Overall	20.46	22.68	22.70	0.02	0.001	0.885
Female	20.46	21.47	21.53	0.07	0.003	0.681
Male	20.46	23.95	23.93	-0.03	-0.001	0.853
Black	20.46	20.81	20.94	0.13	0.006	0.471
Hispanic	20.46	19.73	19.73	0.00	0.000	0.998
Special Education	20.46	24.63	24.68	0.05	0.003	0.729

Table 62. Analysis group 2—Impact of READ 180 on attendance, outlier school removed

Subgroup	SD	Mean control	Mean treatment	Estimated impact	Effect size	*p*-value
Overall	22.29	23.84	23.94	0.10	0.004	0.219
Female	22.29	22.30	22.45	0.15	0.007	0.160
Male	22.29	25.13	25.18	0.05	0.002	0.556
Black	22.29	24.20	24.32	0.12	0.005	0.103
Hispanic	22.29	20.08	20.25	0.17	0.008	0.203
Special Education	22.29	24.06	24.19	0.13	0.006	0.309

Table 63. Analysis group 3—Impact of READ 180 on attendance, outlier school removed

Subgroup	SD	Mean control	Mean treatment	Estimated impact	Effect size	*p*-value
Overall	21.50	20.52	20.77	0.25	0.012	0.077
Female	21.50	18.70	19.03	0.34	0.016	0.015
Male	21.50	21.08	21.34	0.26	0.012	0.121
Black	21.50	21.89	22.19	0.30	0.014	0.088
Hispanic	21.50	23.38	23.32	-0.06	-0.003	0.896
Special Education	21.50	24.13	24.36	0.22	0.010	0.181

Table 64. Analysis group 4—Impact of READ 180 on attendance, outlier school removed

Subgroup	SD	Mean control	Mean treatment	Estimated impact	Effect size	*p*-value
Overall	27.97	25.77	25.76	0.00	0.000	0.060
Female	27.97	18.64	19.08	0.44	0.016	0.008
Male	27.97	30.29	30.11	-0.18	-0.007	0.485
Black	27.97	25.57	25.44	-0.14	-0.005	0.191
Hispanic	27.97	25.47	25.88	0.41	0.015	0.600
Special Education	27.97	33.46	33.40	-0.06	-0.002	0.525

Table 65. Analysis group 5—Impact of READ 180 on attendance, outlier school removed

Subgroup	SD	Mean control	Mean treatment	Estimated impact	Effect size	*p*-value
Overall	24.85	22.66	22.82	0.16	0.006	0.060
Female	24.85	19.80	20.07	0.27	0.011	0.008
Male	24.85	24.75	24.82	0.07	0.003	0.485
Black	24.85	24.01	24.12	0.11	0.004	0.191
Hispanic	24.85	24.68	24.87	0.19	0.008	0.600
Special Education	24.85	26.67	26.77	0.10	0.004	0.525

The negative findings of READ 180 on female student attendance is concerning. After 2 years of exposure to READ 180, it appears females miss more days of school than females in control schools. It is possible that there were differences in attendance between treatment and control schools prior to the start of the intervention. Attendance was not included in the balance tests prior to year 1. However, there may be other unobservable variables that are contributing to this difference in attendance rates between the treatment and control schools. It is important to consider that although the findings were statistically significant, in terms of practical significance, the effect sizes for these comparisons were all under 0.02. In the future, females' attendance will be further examined to investigate these counter-intuitive findings.

III.C.7 Impacts on Students: New Jersey Assessment of Skills and Knowledge

The overall impacts of READ 180 on students' reading achievement were also analyzed using the state reading assessment. Impact analyses were conducted using the NJASK as the outcome variable for 1 year of treatment (analysis group 1), the first and second year 6th grade cohort (analysis group

2), and seventh graders with 2 years of treatment (analysis group 3).[14] First, the NJASK and SAT 10 subtests were correlated (see Tables 66 and 67) and were found to be related. Impacts on students' NJASK Language Arts Literacy scores in three of the five analysis groups are presented in this section. As with the SAT 10 analyses, two aspects of the results were examined for each group. The first is whether any of the results are statistically significant at the .05 level. The second is whether any of the results reach an effect size threshold of .20.

Table 66. Correlations between SAT 10 subscales and NJASK- 6th grade scores

Measure	1	2	3	4
1. SAT 10 Reading	–	0.77**	.88**	.63**
2. SAT 10 Vocabulary		–	.38**	.48**
3. SAT 10 Comprehension			–	.57**
4. NJASK Language Arts				–

* $p < .05$, ** $p < .01$

Table 67. Correlations between SAT 10 subscales and NJASK- 7th grade scores

Measure	1	2	3	4
1. SAT 10 Reading	–	.82**	.91**	.59**
2. SAT 10 Vocabulary		–	.50**	.51**
3. SAT 10 Comprehension			–	.51**
4. NJASK Language Arts				–

* $p < .05$, ** $p < .01$

State test results from the NJASK Language Arts Literacy exam were analyzed for groups 1, 2, and 3. Similar to the impacts of READ180 on SAT 10 achievement, no overall effects were found in any of the three analysis groups, either in terms of p-values or effect sizes, as shown in Table 68. These results confirm the SAT 10 findings that the READ180 program does not appear to have had a significant effect on overall student reading achievement.

[14] Complete state test data was only available for the 6th and 7th grade cohorts; therefore, only these analyses could be conducted. We have requested 8th grade state test data from Newark, but have not received it to date.

Table 68. Analysis groups 1, 2, and 3 – Impact of READ 180 on NJASK LAL

	Unadjusted means		Regression-adjusted means				
Analytic Group	Control	Treatment	Control	Treatment	Estimated impact	Effect size	*p*-value
1	171.32	169.70	165.17	167.85	2.68	0.117	0.183
2	165.27	164.08	163.97	164.48	0.51	0.023	0.861
3	171.50	170.11	169.80	169.11	-0.69	-0.032	0.798

III.D Summary and Discussion

Based on analyses from the first 2 years of Striving Readers data, READ 180 did not have an overall significant impact. Overall, students in treatment schools exhibited the same level of achievement as students in control schools whether they had 1 or 2 years of exposure to READ 180. This is true of all three subtests; Vocabulary, Comprehension, and Language Arts and also holds true when each grade is examined separately. In addition, READ 180 did not have an overall significant impact on students' attendance or on the NJASK Language Arts Literacy test.

There are some important factors to consider, however, when interpreting these results. From year 1 to year 2 a large percentage of students (25 percent) did not receive READ 180 instruction. This is partly because these students transferred to other schools, although some students who were supposed to receive READ 180 and who were in treatment schools did not receive it. See Table 69 for a detailed description of reasons why eligible students did not receive READ 180.

Table 69. Reasons students did not receive READ 180 in year 2

Reason for not receiving READ 180	Number of students
Transferred	68
Deceased	1
Long-term absence	1
Unknown / Other	66
Total	136 (25%)

In addition, records indicate that for Year 2, more than 80 percent of teachers (81.8%) had students who did not have adequate exposure to the full instructional software READ 180 components (students using the software a minimum of three times a week and 15 minutes per session). This low

level of fidelity implies that although students were in READ180 classrooms, they were not given the full exposure to the software, thus potentially leading to null findings. Even though students had the opportunity to receive READ 180 instructional software time, they may not have gotten the prescribed curriculum or the full amount of READ 180 instruction. Furthermore, individual student attendance could affect these results. Chronically absent or transfer students were less likely to receive adequate instructional time with the software. Teachers' level of training with READ 180 may also be a factor. Just over half (56.5 percent) of the teachers received the full READ 180 training. The remaining 43.5 percent had either adequate or low participation in the training. It is possible that these teachers were not adequately prepared to implement READ 180 instructional software in the classroom.

It is important to note that although there was low fidelity to the software exposure, there was high fidelity to other components of the READ 180 curriculum. Class size was within READ 180 guidelines (100 percent of teachers had class sizes under 21 students) and 100 percent of teachers followed the student assessment component of READ 180. In light of these fidelity findings, additional training and attention should be paid to stressing the use of the software at least three times a week. Support should be given to teachers to help them reach this goal in their planning and implementation of the curriculum.

Despite the lack of overall findings, it is important to consider the significant impacts found using the subgroup analyses. When looking at the subgroups, multiple significant impacts were found, indicating that for certain populations, READ 180 had an impact on student outcomes. In this section, the implications of these subgroup analyses will be discussed. In particular, findings that were statistically significant, (with a *p*-value is 0.050 or smaller), and also findings that had effect sizes of .20 or larger (small to medium effects as defined by Cohen, 1977) will be highlighted. See Table 70 for all subgroup analyses where READ 180 had an impact on student outcomes.

When examining the populations where READ 180 had an impact, certain subpopulations were more affected than others, which could have many implications. In particular, in the group of 8th grade students with 2 years of treatment, Hispanic students' Language Arts achievement increased by an effect size of 0.466, a finding that was statistically significant. Hispanic students (8th graders) in the treatment group who had exposure to 2 years of READ 180 scored .446 standard deviations higher than Hispanic students in the control group. Although this was the only finding that was statistically significant, eight other analyses of Hispanic students' achievement had effect sizes greater than 0.20. These effect sizes were found in all subtests of the SAT 10: Vocabulary, Language Arts, and Comprehension. They were found after 1 year of treatment (6th grade combined group)

and across all groups with 2 years of treatment. This suggests that Hispanic students exposed to READ 180 had scores that were at least 0.20 standard deviations higher than their counterparts in the control group. These findings are especially important in light of recent reports from the National Center for Education Statistics (NCES), which reported that since 1992, the gap between Hispanic and White students' reading scores has not changed, and Hispanics continue to score well below their White counterparts (Planty et al., 2008). From these findings, READ 180 may be an effective way of raising Hispanic students reading abilities and closing the achievement gap.

Another subgroup that appeared to benefit from READ 180 was males. As reported previously, 7th grade males with 2 years of exposure, and 7th and 8th grade males, combined, with 2 years of exposure scored significantly higher on the Vocabulary subtest; these significant findings had effect sizes of .227 and .338 respectively. In addition to these findings, effect sizes of 0.20 or greater were found for males on the subtests of Comprehension and Language Arts. For males, 2 years of exposure to READ 180 seems to be particularly important. Males across the country continue to score lower than females on tests of reading achievement (Klecker, 2006; Planty et al., 2008). It appears that exposure to 2 years of READ 180 may be especially effective for males, and could contribute to raising their overall levels of reading achievement.

Although males seemed to be impacted by exposure to READ 180, the same results were not always found for females. Females with 1 year of exposure to READ 180 did score significantly higher than control females on Language Arts. However, negative treatment effects were found for females with 2 years of exposure. For female 7th graders with 2 years of READ 180, a negative effect size of -0.242 on Language Arts was found; for female 8th graders with 2 years of exposure to READ 180, a negative effect size of -0.224 on Vocabulary was also found. Additionally, 8th grade females with 2 years of exposure and 7th and 8th grade females, combined, with 2 years of exposure to READ 180 had significantly more absences than females in the control group. Although females continue to outperform males on literacy achievement (Klecker, 2006; Planty et al., 2008) it is still important to try to increase literacy achievement for all students, especially the underperforming population eligible for READ 180.

READ 180 also appeared to be effective for special education students. Special education students with 1 year of treatment scored significantly higher than control students on Vocabulary. In two analyses, 7th graders and 7th and 8th graders combined, who had 2 years of exposure to READ 180, scored significantly higher on the Comprehension subtest; these significant findings had effective sizes greater than 0.20 (.374 and .237 respectively) as well. In addition to these significant findings,

Table 70. Summary of analysis findings by subgroups

Analysis groups	Outcomes	Overall		Female		Male		African-American		Hispanic		Special Education	
		ES	Sig	ES	Sig	ES	Sig	ES	Sig	ES	Sig	ES	Sig
1	Attendance												
	Vocabulary												✓
	Comprehension												
	Language Arts				✓								
2	Attendance												
	Vocabulary												
	Comprehension												
	Language Arts									✓			
3	Attendance												
	Vocabulary					✓	✓			✓		✓	
	Comprehension					✓				✓		✓	✓
	Language Arts			✓ *						✓			
4	Attendance				✓*								
	Vocabulary			✓ *						✓			
	Comprehension									✓		✓	
	Language Arts					✓				✓	✓		
5	Attendance				✓*								
	Vocabulary					✓	✓			✓			
	Comprehension					✓						✓	✓
	Language Arts									✓			

✓ * denotes negative effects were found during analysis.

effect sizes of larger than 0.20 were found for Comprehension of 8th graders with 2 years of treatment, and for Vocabulary of 7th graders with 2 years of treatment. Special education students with 1 year of treatment scored higher than control students on Vocabulary, and students with 2 years of exposure to READ 180 scored significantly higher than special education students in the control group. Gains in Vocabulary may be more likely to be seen after only 1 year of treatment, while gains in Comprehension may take more exposure to READ 180. Increasing reading achievement in this population can ensure that students with more complex educational needs are getting the support they need to reach their full potential.

Finally, it should be noted that one of the subgroups used in the analyses was not impacted by exposure to READ 180. African-American students in treatment classrooms did not score significantly different from African-American students in the control group. In addition, no effect sizes of 0.20 or greater were found in this population. Given that African-American students (similar to Hispanic students) tend to score below White students in reading achievement (Planty et al., 2008), a lack of any significant findings for this group is a concern.

Implementation of the Whole School Intervention: Years 1 and 2 IV

IV.A Implementation Study Design

Research on effective professional development indicates that classroom-embedded professional development produces changes in teachers' instructional behaviors over time. Newark Public Schools (NPS) incorporated this understanding into its design of the whole-school model. Both the New Jersey City University (NJCU) and the National Urban Alliance (NUA) professional development providers were required to provide in-school, classroom-embedded professional development to reinforce the practice of text-based content literacy strategies.

The extent to which teachers in Striving Readers schools fully participated in the whole-school intervention was measured and summarized in both year 1 and year 2 of the evaluation. Fidelity was measured by obtaining records of teachers' participation in NJCU and NUA whole-group trainings, and receipt of in-school coaching visits delivered by NJCU, NUA, and resource teacher coordinators (RTCs). NJCU trainings were available to language arts teachers and NUA trainings were available to content teachers. Teachers who taught both language arts and content areas were eligible to participate in both NJCU and NUA trainings.

IV.A1 Structural Supports

IV.A1.1 Role of the District

District personnel function in a supportive role, providing both material and human resources to support the implementation of the whole-school intervention in Striving Readers schools. The district is organized into geographic regions—School Leadership Teams—each headed by an Assistant Superintendent who provided input relative to scheduling and implementation of training, as well as to facilitated participation of building administrators. The Assistant Superintendent of the Department of Teaching and Learning is the Project Director. She is supported in this role by the Director of the Office of Language Arts Literacy, the Project Manager, and the resource teacher coordinators, who serve as on-site teacher trainers and liaisons among schools, the district, and developers.

As the Project Director, the Assistant Superintendent manages project oversight, ensuring the smooth implementation of the project. She has the following tasks:

- Meet with the Director of Language Arts Literacy regularly, relative to the Striving Readers program;
- Resolve logistical, interpretive, and other problems at the school level as well as with partnering agencies;
- Conduct on-site visits to observe program implementation;
- Meet with NJCU and NUA representatives;
- Provide ongoing program status information to the Superintendent; and
- Confer with School Leadership Team Assistant Superintendents regarding the project.

As a Project Supervisor, the Director of Language Arts Literacy assumes supervisory responsibility for the Striving Readers grant, including the hiring, supervision, and evaluation of staff. She plans and assists program implementation and conducts site visits to monitor project fidelity. She has the following responsibilities:

- Conducting ongoing conferences with the Project Manager;
- Scheduling assessments;
- Maintaining records and reports;
- Scheduling and supervising all training;
- Ordering all grant-related materials; and
- Providing direction to NJCU and NUA.

The full-time Project Manager is dedicated to overseeing the day-to-day implementation of the Striving Readers grant. She coordinates teacher professional development, scheduling, student assignments and data collection and seeks to ameliorate emergent problems, such as difficulties relative to the acquisition of materials. She served as the on-site liaison among teachers, the developers, the Project Director, and Director of Literacy. The Project Manager also interfaces with parents to provide information relative to the project. She, along with Westat and the assigned RTCs, facilitates the completion of teacher surveys on staff development days. The Project Manager maintains accurate records and prepares required reports.

The five RTCs provide support to READ 180 teachers and serve as liaisons among schools, the district, and the developer. The RTCs supported READ 180 teachers via activities such as coaching, conducting needs assessments of Striving Readers staff, conferring with administration and literacy coaches relative to program planning and implementation, maintaining accurate records, planning relevant professional development activities, giving demonstration lessons, and interpreting student assessment data. RTCs are required to complete an 'RTC Log' each time they visit a school. However, in year 1 the log did not allow the research team to differentiate between visits to support the whole-school intervention and visits to support the targeted intervention. This was corrected in year 2, and the new form is provided in Appendix B.

IV.A1.2 Roles of Building Staff

Building administrators supported the project through scheduling, procuring substitutes as needed during in-school coaching visits, and through the process of monitoring instructional and classroom supervision. Literacy coaches provide in-house mentoring assistance to participating language arts teachers during lessons and during grade-level meetings.

IV.A1.3 Developers' Roles

The role of the developers was to provide substantive professional development to teachers, coaches, RTCs, and building administrators through the summer workshops; large-group sessions during the school year; and ongoing coaching visits.

IV.A2 New Jersey City University

The role of NJCU in year 2 was to provide language arts teachers and literacy coaches with a 4-day[15] summer institute, three 1-day[16] professional development sessions during the school year, and 10 in-school visits per school over the course of the school year. The goals of these visits are to provide assistance to teachers through modeling and discussion of such classroom practices as developing

[15] Each day is a 4-hour session.

[16] Each day is a 5.5-hour session.

vocabulary, using graphic organizers, establishing routines for silent reading, and improving reading comprehension strategies. The number of visits was increased from year 1 (5 visits) to year 2 (10 visits) to better ensure parity relative to the professional development received by content area teachers.

In addition, NJCU was to provide specific training to literacy coaches on three occasions during the school year. These sessions were to provide coaches with strategies for collaborating and supporting the classroom teachers [17].

The content of NJCU's professional development is detailed below. To support the district's core literacy program, NJCU's professional development was designed to introduce and reinforce the use of instructional strategies that enhance vocabulary development, fluency, and reading comprehension. The instructional strategies of NJCU's large group trainings primarily address the development of linguistic acquisition, establishing routines for silent reading, and improving reading comprehension and writing strategies. A binder of materials that included the Newark Public Schools "Language Arts Literacy Policy and Practices for Elementary, Middle and Secondary Schools," and articles, strategies, graphic organizers, and sample activities on literacy strategies was distributed at each NJCU large group professional development event. Daily feedback surveys were also used to ascertain the additional needs of participants; the workshop topics were revised based on the feedback to better address the identified areas of need. Sample workshop topics include:

- **How We Read**

  Understanding the complexity of the reading process via prior knowledge; grapho-phonemic, semantic, and syntactical strategies; linguistic competence; and vocabulary enrichment.

- **How We Assess and Teach Reading**

  Using assessment and diagnosis, miscue analysis, and strategies that promote success in reading, such as literature groups and circles; oral and silent reading best practices; purpose-setting; question-answer relationships; text annotation; note-taking; anticipation guides and post-reading reflection; double-entry journals; SQ3R; flowcharts, webs, and other graphic organizers; K-W-H-L-S; and personal dictionaries and vocabulary keepers.

[17] Each session is 5.5 hours.

- **How We Structure Effective Literacy Programs**

  Included a brief history of literacy instruction, effective whole-class and small-group instruction, targeted instruction, phonemic awareness, guided reading, balanced literacy, and reading and writing across the curriculum.

- **Best Practices in Writing Instruction**

  Offered a historical perspective on writing instruction, the writing process, spelling and vocabulary development, the reading-writing connection, time management and the writing process, and extending the writing process.

- **How to Promote Speaking and Listening Skills**

  Instruction included extending the reading-writing process to everyday conversation and enhancing the question/answer relationship.

NJCU was contracted to provide a minimum of 10 on-site coaching visits to each school, focusing on the quality of literacy instruction through observation, demonstration, and coaching. These visits provide an important opportunity for teachers to observe modeling sessions based on site-specific instructional needs and participate in debriefing periods afterwards. During the site visits, NJCU coaches observe language arts literacy teachers and provide modeling and assistance in the literacy areas covered in the large-group trainings. The topics discussed and the practices modeled in the classroom include developing vocabulary, establishing routines for silent reading, identifying and using reading comprehension strategies, making reading-writing connections, responding to text with writing prompts, using graphic organizers, initiating summary writing, identifying major themes in texts, engaging in reading and writing of poetry, and developing habits of revising and editing. A debriefing session follows each lesson to allow coaches to describe what they see and identify important details that foster advanced thinking. In subsequent visits, the NJCU coaches observe teachers as they implement the demonstrated lessons.

IV.A3 National Urban Alliance

NUA, the second professional development provider, provides professional development for teachers to support literacy across the content areas. Math, science, and social studies teachers were to receive three training sessions during the 2007 summer institute, two large-group workshops during the school year, and 15 school-based classroom visits. The purposes of the summer institute and large-group workshops were to train teachers in cognitive strategies that focus on the teaching, learning, and assessment of advanced thinking; to break down school isolation; to build effective school teams; and to create a community of learners. A strong meta-cognitive and affective component was to be part of each workshop, encompassing such instructional issues as ethnic, gender, and racial bias; multiple intelligences; English language learners; special needs students; and learning styles. NUA's professional development strategies intend to accelerate the cognitive skills that support literacy development through strategies that are brain based; reflect the cultural learning patterns of students; and address the district's standards and learning goals.

Thinking Maps® Overview

Circle Map: Used for seeking context. This tool enables students to generate relevant information about a topic as represented in the center of the circle. This map is often used for brainstorming, building both **vocabulary and comprehension.**

Bubble Map: Designed for the process of describing attributes. This map is used to identify character traits (language arts), cultural traits (social studies), properties (science), or attributes (mathematics). This map develops **vocabulary and comprehension, and, in doing so, builds fluency.**

Double Bubble Map: Used for comparing and contrasting, such as characters in a story, historical figures, or social systems. This map is also used for prioritizing information within a comparison and building **comprehension**.

Tree Map: Enables students to do both inductive and deductive classification and is particularly useful in the sciences. Students learn to create general concepts, main ideas, category headings, supporting ideas and details, merging **literacy and content area skills to make meaning (comprehension).**

Brace Map: Used for identifying the part-whole, physical relationships of an object. This map, like the **Tree Map**, is very much a visual imagery strategy endorsed by the SIM (Strategic Instruction Model) of the Center for Research on Learning, also noted in the *Reading Next* report as a strategy to develop **comprehension.**

Flow Map: Flow charts are used for showing sequences, order, timelines, cycles, actions, steps, and directions. This map also develops comprehension and fluency skills, as relationships between events are clearly seen.

Multi Flow Map: A tool for seeking cause/effect relationships. The map expands when showing historical causes and predicting future events and outcomes. This map increases **comprehension.**

Bridge Map: Provides a visual pathway for creating and interpreting analogies. This map positively affects **comprehension, vocabulary, and fluency** as analogical reasoning and metaphorical concepts for deeper content learning are developed.

The primary tools NUA uses to connect the content area and literacy are Thinking Maps®, which NUA uses as a professional development foundation to assist students in constructing, creating, and communicating meaning in the content areas by developing vocabulary, comprehension, and associated fluency strategies. NUA professional development has tackled these identified skills by connecting them to theoretical research on how the brain develops and how students from urban backgrounds learn.

NUA also promotes "content literacy" strategies that increase student achievement as referenced by recognized adolescent literacy specialists (Kylene Beers, Janet Allen, Nancy Atwell, Tom Romano, Alfred Tatum, Michael Smith). These specialists agree that students must know the vocabulary of the content discipline, must access prior knowledge of the content or subject area, and must possess study skills such as note-taking in their predominant learning style to assist their ability to recall information from multiple sources. Students must bring skills in reading expository text rather than narrative text to the foreground in content disciplines, must monitor their understanding of the text and adjust speed and concentration to fit the difficulty of the text, and must possess techniques for organizing the information. In addition, they must have mastered basic skills of decoding, fluency, phonics, and comprehension, the learning to read skills, so they can now read to learn. The primary content literacy skills addressed in the NUA's professional development are vocabulary, fluency, and comprehension developed through defining in context; describing; comparing and contrasting; classifying; sequencing; cause and effect reasoning; part-whole relationships; and analogies.

During the first year of the study (2006-07), teachers were introduced to four thinking maps and one additional strategy to their literacy content connections. They were taxonomies (literacy content), Circle Maps, Bubble and Double Bubble Maps, and Flow Maps (Thinking Maps®). In year 2 (2007-08), teachers were introduced to Brace Maps, Multi-Flow Maps, and Tree Maps while refining their use of the initial thinking maps. The reasoning behind the staggered approach to the introduction was to provide these teachers with ample opportunity to "put language to work" in content area classrooms so that students transfer learning from their language arts classroom to their social studies, mathematics, and science classrooms. To reiterate NUA's objective, the goal is to have students reach a point where they can proficiently explore and construct meaning from texts: "When students put language to work for them in content classrooms, it helps them to discover organize, retrieve, and elaborate what they are learning." (Vacca, 2000).

To reinforce the implementation of the instructional strategies covered in the large-group trainings, NUA mentors visited each Striving Readers school. Fifteen school-based sessions were to be conducted to demonstrate (and provide coaching relative to) the application of the strategies presented during the large-group workshops. In the demonstration lessons, NUA mentors focused on the three systems that exist in every classroom: the relationship of teacher to student, the relationship of teacher to content, and the delivery system. Preceding each lesson, the mentor briefs the teacher on the lesson's content, strategies, and rationale for selection of strategies.
The on-site demonstration lessons were to be conducted with half of each school's grade 6-8 faculty in attendance during either morning or afternoon sessions to minimize the need for substitute

teachers. NUA's demonstration lessons are designed to address the heterogeneous make-up of the classroom, be conducted in front of faculty from the school, use authentic instructional materials, be cued to existing courses of study and curricular demands, and vividly illustrate the significant differences in advanced-level thinking that the cognitive strategies would make possible. A debriefing session follows each lesson to allow observers to describe what they saw and identify important details that foster advanced thinking. After the demonstration lesson(s), the NUA design offers opportunities for teachers to practice what was observed. NUA mentors then use the peer coaching model to share with teachers what was observed and make additional comments.

IV.B Implementation Results

To determine the degree of fidelity to the whole-school intervention, multiple components were evaluated for each Striving Readers school. Subscores were developed to measure the extent to which each component was implemented. These components are:

- Whole-group training
  - NJCU
  - NUA
  - RTCs (year 1 only)
- In-School coaching
  - NJCU
  - NUA
  - RTCs

Each of these components is discussed in the following sections

IV.B1 Whole-school Training Participation

The year 1 whole-school Intervention consisted of both whole-group professional development and in-school teacher support. The degree of implementation in year 1 was determined by teacher

participation in these professional development opportunities and the number of in-school visits, as discussed below.

The level of implementation of professional development in year 1 was calculated by examining the extent of teacher participation in the whole-group training activities provided by NUA, NJCU, and by the District RTCs. In year 2, level of participation was calculated by teachers' participation in whole-group training activities provided by NJCU and NUA. No whole-group trainings by RTCs were offered in year 2 (4 days of whole group trainings were held in year 1). Each school was given a participation score, based on the percentage of eligible teachers who attended the relevant whole-group training sessions. For example, in the NUA column, a school was given a score of 4 if more than three-quarters of all eligible content area teachers attended the NUA whole-group professional development sessions. Similarly, a score of 1 was assigned to a school where less than a quarter of teachers attended. An average score was then computed per school, based on the three components; attendance at NUA, NJCU, and RTC whole-group sessions. Table 71 provides a comparison of whole-group participation scores in years 1 and 2. Based on the average of participation scores, each school was assigned a participation level; Low, Low to Moderate, Moderate to High, or High.

Average Score	School Participation Rating
3.1-4	High
2.1-3	Moderate to High
1.1-2	Low to Moderate
0-1	Low

Table 71 shows that only 1 school (5 percent) in year 1 had a low level of teacher participation in whole-group sessions. The remainder of the schools (42 percent) attained either low to moderate levels (53 percent) or moderate to high levels of participation (42 percent). No school attained a high level of participation.

As can be seen from Table 71, in year 2, no schools had low levels of teacher participation in whole-group trainings; however, no schools achieved a high level of participation. Only 3 schools had moderate to high participation (16 percent) and the remaining 16 schools had low to moderate participation (84 percent). Only 4 schools increased their average participation score between year 1 and year 2, although 3 schools scored the same in year 1 and year 2. The remaining 12 schools' participation scores decreased from year 1 to year 2. However, in year 2, there were no RTC whole group trainings, so comparisons of overall participation cannot be conducted.

Table 71. Year 1and 2 ratings by school on teacher participation in whole-group professional development

	Year 1					Year 2				Change from Year 1 to Year 2
School	NUA	NJCU	RTC	Average Score	Level	NUA	NJCU	Average Score	Level	
School 1	3	1	2	2.00	Low to Moderate	4	2	3	Moderate to High	1.00
School 2	1	1	3	1.67	Low to Moderate	3	1	2	Low to Moderate	0.33
School 3	3	3	1	2.33	Moderate to High	1	1	1	Low to Moderate	-1.33
School 4	2	2	3	2.33	Moderate to High	3	1	2	Low to Moderate	-0.33
School 5	3	1	2	2.00	Low to Moderate	3	1	2	Low to Moderate	0.00
School 6	2	3	1	2.00	Low to Moderate	2	1	1.5	Low to Moderate	-0.50
School 7	2	2	3	2.33	Moderate to High	2	1	1.5	Low to Moderate	-0.83
School 8	2	3	1	2.00	Low to Moderate	3	1	2	Low to Moderate	0.00
School 9	1	3	3	2.33	Moderate to High	2	2	2	Low to Moderate	-0.33
School 10	2	3	2	2.33	Moderate to High	2	1	1.5	Low to Moderate	-0.83
School 11	2	3	1	2.00	Low to Moderate	2	1	1.5	Low to Moderate	-0.50
School 12	3	3	2	2.67	Moderate to High	2	2	2	Low to Moderate	-0.67
School 13	1	2	1	1.33	Low to Moderate	1	1	1	Low to Moderate	-0.33
School 14	2	2	3	2.33	Moderate to High	3	2	2.5	Moderate to High	0.17
School 15	2	2	2	2.00	Low to Moderate	1	2	1.5	Low to Moderate	-0.50
School 16	3	2	1	2.00	Low to Moderate	4	1	2.5	Moderate to High	0.50
School 17	2	1	1	1.33	Low to Moderate	1	1	1	Low to Moderate	-0.33
School 18	3	3	1	2.33	Moderate to High	3	1	2	Low to Moderate	-0.33
School 19	1	1	1	1.00	Low	1	1	1	Low to Moderate	0.00
AVERAGE	**2.11**	**2.16**	**1.79**	**2.02**	**Moderate to High**	**2.26**	**1.26**	**1.76**	**Low to Moderate**	**-0.25**

IV.B1.1 NJCU Year 2 Whole Group Training Participation

The first component of NJCU's professional development for language arts literacy teachers was the large-group training sessions. In alignment with the long-term goals of the project (in particular the embodiment of literacy-focused pedagogy) language arts literacy teachers attended the 4 half-days of large group training that constituted the summer institute on August 20-23, 2007. Whole-group training sessions were held during the school year on October 24, 2007, January 20, 2008, and February 27, 2008.

A total of 216 teachers were eligible to receive professional development from NJCU year 2. These eligible teachers have been categorized by their level of professional development activities. The definitions of the participation levels are provided in Table 72.

Table 72. Participation categories for NJCU group training in year 2

Component	Full participation	Moderate participation	Low participation	No participation
Summer institute Oct & Jan/Feb whole group	4 days Plus 3 days	3-6 days	1-2 days	0 days

The number and percentage of teachers at each of the levels of participation outlined above are provided in Table 73.

Table 73. Number and percentage of NJCU-eligible teachers by level of participation in year 2

	Number	Percent
Full participation	4	1.9
Moderate participation	29	13.4
Low participation	89	41.2
No participation	94	43.5
Total	216	100.0

As can be seen from Table 73, some 56 percent of eligible teachers received at least some of the professional development training offered by NJCU. However, more than 40 percent of eligible teachers received none at all.

Despite less than ideal participation, at least some of the variation in teacher participation appears to reside at the school level. At the school level, the percentage of teachers receiving a full or moderate amount of NJCU professional development ranges from 0 to 42.9 percent. A score was created to

summarize the level of participation at the school level for the whole-group trainings provided by NJCU, based on the percentage of teachers in either the full or moderate participation categories. The score was calculated as follows:

Percentage of teachers with full or moderate participation	School Participation Score
75-100%	4 (High)
50-74%	3 (Moderate to High)
25-49%	2 (Low to Moderate)
0-24%	1 (Low)

The breakdown of participation by school is provided in Table 74.

Table 74. Number and percentage of teachers in each school by participation category: NJCU, year 2

School	Total # of teachers	Full participation %	Moderate participation %	Low + no participation %	School participation score
School 1	7	0.0	28.6	71.4	2
School 2	6	0.0	16.7	83.3	1
School 3	5	0.0	0.0	100.0	1
School 4	8	0.0	12.5	87.5	1
School 5	10	0.0	10.0	90.0	1
School 6	11	0.0	0.0	100.0	1
School 7	15	0.0	6.7	93.3	1
School 8	8	0.0	12.5	87.5	1
School 9	7	0.0	42.9	57.1	2
School 10	5	0.0	20.0	80.0	1
School 11	25	0.0	4.0	96.0	1
School 12	10	0.0	40.0	60.0	2
School 13	22	13.6	9.1	77.3	1
School 14	8	12.5	25.0	62.5	2
School 15	12	0.0	25.0	75.0	2
School 16	9	0.0	0.0	100.0	1
School 17	23	0.0	21.7	78.3	1
School 18	10	0.0	0.0	100.0	1
School 19	15	0.0	6.7	93.3	1
Total	**216**	**1.4**	**14.8**	**83.8**	**1.3**

No school achieved the highest or second highest level of participation in the group training sessions, while 14 (73.6 percent) had the lowest level of participation. It is understood that if the level of participation continues to be low, it will have serious implications for the likelihood of showing impacts of the whole-school intervention. School-specific factors that might have caused such wide variation in attendance include staff transfers and communication about attendance for

NJCU-led events. These have been addressed for year 3 and are expected to improve over the subsequent years of the whole-school intervention.

IV.B1.2 NUA Year 2 Whole-Group Training Participation

A total of 263 teachers were eligible to receive professional development from NUA in year 2. These eligible teachers have been categorized by their level of participation in the NUA professional development activities. The definitions of the participation levels are provided in Table 75.

Table 75. Participation categories for NUA group training in year 2

Component	Full	Moderate	Low	None
Summer institute Oct & Jan whole group	3 days Plus 2 days	2-4 days	1 day	0 days

The number and percentage of teachers at each of the levels of participation outlined above are provided in Table 76.

Table 76. Number and percentage of NUA-eligible teachers by level of participation in year 2

	Number	Percent
Full participation	6	2.3
Moderate participation	98	37.3
Low participation	89	33.8
No participation	70	26.6
Total	263	100.0

As can be seen from Table 76, more than 70 percent of eligible teachers received at least some of the professional development training offered by NUA, and 37 percent received a moderate amount. However, 27 percent of teachers received none at all.

Again, at least some of the variation in participation appears to reside at the school level. As shown in Table 77, across the 19 participating schools, the percentage of teachers receiving a full or moderate amount of NUA professional development ranged from 20 to 86 percent. A score was created at the school level to summarize the extent of participation at the whole-group trainings

provided by NUA, based on the percentage of teachers in either the full or moderate participation categories. The score was calculated as follows:

Percentage with full or moderate participation	School participation score
75-100%	4 (High)
50-74%	3 (Moderate to High)
25-49%	2 (Low to Moderate)
0-24%	1 (Low

The breakdown of participation by school is provided in Table 77.

Table 77. Number and percentage of teachers in each school by participation category: NUA, year 2

School	Total no. of teachers	Full participation %	Moderate participation %	Low + no participation %	School participation score
School 1	9	0.0	77.8	22.2	4
School 2	6	0.0	66.7	33.3	3
School 3	5	0.0	20.0	80.0	1
School 4	11	0.0	54.5	45.5	3
School 5	9	0.0	55.6	44.4	3
School 6	15	0.0	26.7	73.3	2
School 7	23	0.0	47.8	52.2	2
School 8	10	0.0	70.0	30.0	3
School 9	8	0.0	25.0	75.0	2
School 10	6	0.0	33.3	66.7	2
School 11	35	0.0	28.6	71.4	2
School 12	15	20.0	20.0	60.0	2
School 13	30	0.0	23.3	76.7	1
School 14	10	20.0	40.0	40.0	3
School 15	14	0.0	21.4	78.6	1
School 16	7	0.0	85.7	14.3	4
School 17	21	0.0	23.8	76.2	1
School 18	12	8.3	58.3	33.3	3
School 19	17	0.0	23.5	76.5	1
Total	**263**	**2.5**	**42.2**	**55.2**	**2.3**

Two of the 19 schools (11 percent) achieved the highest level of implementation for participation in the group training sessions. Six schools (32 percent) had moderate to high levels of implementation, another six (32 percent) had low-to-moderate levels of participation, and five (26 percent) of schools had low participation. It is understood that if the level of participation continues to be low, it will have serious implications for the likelihood of showing impacts of the whole-school intervention. School-specific factors that might have caused such wide variation in attendance, such as staff

transfers and communications about the mandated attendance for NUA-led activities, have been addressed for year 3 and are expected to improve over the subsequent years of the whole-school intervention.

IV.B2 In-School Coaching Participation

The level of teacher support provided by the curriculum developers is calculated by examining the number of in-school visits made by NUA and JCU. Table 78 provides each school with a score for these in-school visits. Here, each school's score is based on the number of visits received compared to the number that was anticipated. For example, in the NUA column, a school is given a score of 4 if it received at least three-quarters of the designated coaching visits. An average score is then computed per school, based on the NUA and NJCU components. Based on this average score, each school is then assigned an overall participation level: Low, Adequate, or High.

Table 78. Years 1 and 2 ratings by school on receipt of in-school teacher support

	Year 1				Year 2				Change from Year 1 to Year 2
School	NUA	NJCU	Average score	Level	NUA	NJCU	Average score	Level	
School 1	4	4	4.0	High	4	4	4	High	0
School 2	4	4	4.0	High	4	4	4	High	0
School 3	4	4	4.0	High	4	4	4	High	0
School 4	4	4	4.0	High	4	4	4	High	0
School 5	4	4	4.0	High	4	4	4	High	0
School 6	4	4	4.0	High	4	4	4	High	0
School 7	4	4	4.0	High	4	4	4	High	0
School 8	4	2	3.0	Adequate	4	4	4	High	1
School 9	4	4	4.0	High	4	4	4	High	0
School 10	4	3	3.5	High	4	4	4	High	0.5
School 11	4	4	4.0	High	4	4	4	High	0
School 12	4	2	3.0	Adequate	4	4	4	High	1
School 13	4	1	2.5	Adequate	4	4	4	High	1.5
School 14	4	1	2.5	Adequate	4	4	4	High	1.5
School 15	4	4	4.0	High	4	4	4	High	0
School 16	4	3	3.5	High	4	4	4	High	0.5
School 17	4	4	4.0	High	4	4	4	High	0
School 18	4	1	2.5	Adequate	4	1	2.5	Adequate	0
School 19	4	1	2.5	Adequate	4	2	3	High	0.5
AVERAGE	**4.0**	**3.1**	**3.5**	**High**	**4.00**	**3.74**	**3.87**	**High**	**0.37**

It is significant to note that in-school coaching had higher participation rates than the whole-group training sessions. In year 1, 68 percent of schools had high levels of in-school coaching participation,

and the remaining six schools had adequate participation. On average, NUA had higher in-school coaching scores than NJCU in both year 1 and year 2.

In year 2, high levels of in-school coaching visits were also found. Eighteen of 19 schools (94.7 percent) had high levels of fidelity, and 17 of those schools had full implementation (a score of 4) for both NJCU and NUA in-school coaching. Only one school (5.3 percent) had an adequate level of in-school coaching visits in year 2. No decrease in average participation score was found between year 1 and year 2. A total of 12 schools did not have a change in participation scores (mainly because participation was already as high as possible) and 7 schools increased their average in-school participation score.

IV.B2.1 NJCU In-School Coaching Participation

The second component of NJCU's professional development for language arts teachers was in-school coaching visits. The plan was for NJCU coaches to visit all 19 Striving Readers schools, starting in September 2007 and ending in May 2008. Each school was supposed to be visited by a NJCU coach 10 times.[18] NJCU visited 18 of the 19 Striving Readers schools in the second year of the grant. Each school was visited by a NJCU coach an average of 8.3 times, ranging from 0 to 11 visits.

A score was calculated for each school based on the number of coaching visits received during year 2. The coaching score is provided in Table 79, and the scoring criteria are provided below:

Number of coaching visits		School score
7.5 and above	(75-100% of intended visits)	4 (High)
5-7.4	(50-74% of intended visits)	3 (Moderate-to-High)
2.5-4.9	(25-49% of intended visits)	2 (Low-to-Moderate)
0-.4	(0-24% of intended visits)	1 (Low)

[18] As contracted through the Striving Readers grant, NJCU was expected to make 5 visits to Striving Readers schools in year 2; however, Title 1 funds were used to subsidize the number of visits for a total 10 visits per school.

Table 79. Number of coaching visits received by school and resulting coaching score: NJCU, year 2

School	Number of coaching visits	School coaching score
School 1	10	4
School 2	10	4
School 3	11	4
School 4	10	4
School 5	10	4
School 6	10	4
School 7	11	4
School 8	10	4
School 9	11	4
School 10	10	4
School 11	10	4
School 12	10	4
School 13	10	4
School 14	10	4
School 15	10	4
School 16	10	4
School 17	10	4
School 18	0[a]	1
School 19	3	2
Total	**9.3**	**3.7**

[a]Due to miscommunication between NJCU and School 19, no in-school visits were conducted for this school in year 2. This miscommunication has been addressed; and School 19 is receiving in-school coaching in year 3.

In year 2, as can be seen from Table 79, fully 89 percent, or 17 of the schools, received between 75-100 percent of intended coaching visits laid out in the intervention model. One school received only three coaching visits, and the remaining school received no visits.

IV.B2.2 NUA In-School Coaching Participation

The second component of the whole-school intervention is the in-school visits provided by the NUA mentors. The plan was for NUA to visit all 19 Striving Readers schools in the first year of the grant, starting in September 2007 and ending in May 2008. Each school was supposed to be visited by a NUA mentor for 15 days. Each school received an average of 15 visits. The number per school ranged from 13 to 17 visits, as shown in Table 80.

A score was calculated for each school based on the number of coaching visits received during year 2. The coaching score is provided in Table 80, and the scoring criteria are provided below:

Number of Coaching Visits	School Score
11.25 and above (75-100% of intended visits)	4 (High)
7.5-11.24 (50-74% of intended visits)	3 (Moderate to High)
3.75-7.4 (25-49% of intended visits)	2 (Low to Moderate)
0-3.74 (0-24% of intended visits)	1 (Low)

Table 80. Number of coaching visits received by school and resulting coaching score: NUA, year 2

School	Number of coaching visits	School coaching score
School 1	15	4
School 2	15	4
School 3	16	4
School 4	15	4
School 5	17	4
School 6	14	4
School 7	15	4
School 8	15	4
School 9	15	4
School 10	15	4
School 11	15	4
School 12	16	4
School 13	14	4
School 14	15	4
School 15	13	4
School 16	15	4
School 17	15	4
School 18	15	4
School 19	14	4
Average	15	4

All 19 schools received all or nearly all of the coaching visits intended by the intervention. This suggests that NUA was successful at delivering the amount of coaching promised. It is possible that the coaching visits were able to mitigate the low participation in the group sessions. It can be seen from Table 81 that, on average, teachers got an extra 15.23 hours of instruction from NUAs' coaching visits.

IV.B2.3 RTC In-School Coaching Participation

In addition to the in-school support from developers described previously, language arts teachers also receive support from the district RTCs. These support visits are provided on an as-needed basis. Between September 11, 2007, and June 24, 2008, Striving Reader RTCs conducted visits to all 19 schools. RTCs conducted a total of 802 logged visits during year 2. Of these 802, a total of 561 (70 percent) were to Striving Readers schools. Each Striving Reader school was visited by an RTC an average of 29.5 days, ranging from 15 to 50 visits, as shown in Table 81.

Table 81. Average number of NUA coaching hours received by school in year 2

School	Total # of teachers	# coaching visits	Avg. hours rec'd	Receipt of coaching visits: Percent of teachers w. following participation levels[a]			
				0 hrs	1-15 hrs	16-30 hrs	31+ hrs
School 1	9	15	24.66	0	2	4	3
School 2	6	15	23.49	1	0	3	2
School 3	5	16	21.45	0	1	3	1
School 4	11	15	24.06	2	1	4	4
School 5	9	17	16.06	0	2	7	0
School 6	15	14	11.41	2	10	3	0
School 7	23	15	9.11	6	12	5	0
School 8	10	15	21.18	0	1	9	0
School 9	8	15	27.60	0	1	4	3
School 10	6	15	12.92	2	1	3	0
School 11	35	15	5.62	7	28	0	0
School 12	15	16	18.51	3	6	1	5
School 13	30	14	6.49	9	21	0	0
School 14	10	15	13.85	3	1	5	1
School 15	14	13	6.58	1	13	0	0
School 16	7	15	11.74	1	6	0	0
School 17	21	15	8.71	12	2	6	1
School 18	12	15	22.48	1	0	11	0
School 19	17	14	3.46	6	10	1	0
Total	263	15	15.23	21.3	44.9	26.2	7.6

[a] It is difficult to determine the expected number of hours per school visit, as the visits were tailored to the specific needs of each school and the type of training provided (such as group sessions or individual demonstration lessons) and sometimes depended on the level of substitute coverage obtained.

During these visits, RTC worked with teachers on various whole-school activities, such as offering classroom support, coaching, modeling, offering assistance with student work, and using student data to inform instruction. In addition, they assisted in preparing for the NJASK, the GEPA initiative, and standards-based lessons. Often RTCs worked on multiple activities during one visit. Of the support activities provided during the in-school visits at Striving Readers schools, the largest percentage of visits conducted were logged either as "coaching" visits (33.7 percent) or

"teacher/coach conference" (32.1 percent). Comparisons of year 1 and year 2 data are not available due to the change in the visitation forms between school years; however the number of visits to each school in year 2 is shown in Table 82.

Table 82. Number of RTC coaching visits received by school in year 2

School	Number of RTC coaching visits
School 1	23
School 2	22
School 3	30
School 4	32
School 5	38
School 6	32
School 7	29
School 8	50
School 9	19
School 10	23
School 11	34
School 12	21
School 13	35
School 14	46
School 15	29
School 16	27
School 17	39
School 18	17
School 19	15
Average	29.5

IV.B3 Participation Summary

A summary scale for year 2 was developed to describe the picture of connected professional development inputs involved in the whole-school intervention model. Table 83 provides each school's score for the multiple facets of the whole-school intervention professional development—the group training sessions and the in-school coaching visits, for the NUA and the NJCU intervention models. In addition, an overall implementation score and level of implementation are calculated for each school in the study. The definitions for the school-level implementation are based on the implementation scores for group sessions and coaching visits for NJCU; they are listed in the following box.

Average Implementation Score	Overall Implementation Level
4.0	High
3.0-3.9	Moderate to High
2.0-2.9	Moderate
0-1.9	Low

Table 83. School-level summary scores for participation in whole-school intervention in year 2

School	Implementation scores by component					Summary implementation scores
	NUA		NJCU			
	Whole group training	In-school coaching	Whole group training	In-school coaching	Average score	
School 1	4	4	2	4	3.5	Moderate-to-high
School 2	3	4	1	4	3	Moderate-to-high
School 3	1	4	1	4	2.5	Moderate
School 4	3	4	1	4	3	Moderate-to-high
School 5	3	4	1	4	3	Moderate-to-high
School 6	2	4	1	4	2.75	Moderate
School 7	2	4	1	4	2.75	Moderate
School 8	3	4	1	4	3	Moderate-to-high
School 9	2	4	2	4	3	Moderate-to-high
School 10	2	4	1	4	2.75	Moderate
School 11	2	4	1	4	2.75	Moderate
School 12	2	4	2	4	3	Moderate-to-high
School 13	1	4	1	4	2.5	Moderate-to-high
School 14	3	4	2	4	3.25	Moderate-to-high
School 15	1	4	2	4	2.75	Moderate
School 16	4	4	1	4	3.25	Moderate-to-high
School 17	1	4	1	4	2.50	Moderate
School 18	3	4	1	1	2.25	Moderate
School 19	1	4	1	2	2	Moderate
Average	**2.26**	**4.00**	**1.26**	**3.74**	**2.82**	**Moderate**

As can be seen in Table 83, although no school achieved full implementation of all four components of professional development, 53 percent (10 schools) of schools had moderate-to-high levels of implementation for the whole-school intervention. The remaining nine schools all had moderate levels of implementation, taking into account all components of the whole-school professional development.

It should be noted that the relatively high average levels of participation are related more to the high levels of whole-school coaching than to high levels of teacher participation in the group training. Even where teacher participation in the group professional development was poor, the developers (NUA and NJCU) compensated through multiple in-school visits.

IV.C Barriers to Whole-School Implementation Year 2

The most significant difference between the whole-school intervention "as planned" and "as implemented" was the low level of participation of teachers in both NJCU and NUA summer trainings. The teachers who received very little or no training pose a serious problem for implementation of the whole-school intervention. If whole-school intervention effects are not found, it may be due to low participation rates of teachers rather than to the ineffectiveness of the intervention itself. Based on focus groups of teachers and interviews with district administrators, several barriers to participation in year 2 have emerged.

One of the challenges mentioned was that teachers felt many of the trainings were a repeat of trainings they had attended in year 1. This may have affected their willingness to attend future trainings held by NUA or NJCU. It was suggested that separate trainings be held for returning and new teachers. Many teachers commented that a lack of timely and clear communication about the summer trainings and previous commitments kept them from attending the summer institutes. Teacher contracts in Newark specify that attendance at summer professional development activities cannot be mandated. Although teachers are paid for their attendance at the summer institutes, attendance is completely voluntary.

Miscommunication was a barrier for the trainings held during the school year. Teachers reported some confusion as to whether they should attend training, which training they should attend, and where that training occurred. District staff sent official letters to each school principal containing this information, but sometimes it appeared that the message was distorted by the time it reached the teachers themselves. District personnel have indicated that measures have been taken in year 3 to increase communication and inform principals and teachers of these trainings ahead of time. In year 3, principals will be given a list designating which trainings specific teachers should attend. It is hoped that this will increase communication between the administration and teachers and improve attendance at the summer and school-year trainings.

Another significant barrier affected trainings scheduled during the school year. NPS provides set-aside days for district-wide professional development during the school year, and all training (not just for the Striving Readers grant) occurs on these days. Therefore, the first decision is whether the teacher should attend the Striving Readers professional development sessions, the other sessions also scheduled, or remain in the school for departmental meetings. In fact, content area teachers

were frequently required to attend their departmental meetings and could not/did not participate in the NUA training.

If the Striving Readers training is chosen, there are a number of teachers who are eligible to attend both the NUA and the NJCU sessions. (In many middle schools, the language arts literacy teacher is also the social studies teacher). Therefore, one curriculum partner is in direct competition with the other partner.

It is hoped that in year 3 these trainings can be held on nonconflicting days, although this may be logistically challenging. The district has only a certain number of professional development days allotted, and there are multiple initiatives taking place throughout the district that require whole-group trainings. Alternate methods of training teachers (i.e. part- or whole-day pull out) are being explored. However there are benefits and drawbacks to these training methods as well, and district staff are considering their options carefully.

In addition to low participation by the teachers in the professional development sessions, teacher turnover from year 1 to year 2 was also high (see Table 84). Despite direction from NPS asking principals not to reassign Striving Readers teachers, teacher turnover was 30 percent. This turnover rate is high in comparison to the national average which is typically reported at approximately 15 percent (Ingersoll, 2001; Luekens et al., 2004). Another challenge may have been a high rate of principal turnover as well. Principal turnover from year 1 to year 2 was 42 percent (see Table 85). If principals were asked not to reassign teachers, but then they left, new principals may not have learned of this request.

Table 84. Teacher turnover from year 1 to year 2

Year 1 teacher	Year 2 teacher	Number of teachers
Yes	Yes	238
Yes	No	99
No	Yes	125

Table 85. Principal turnover from year 1 to year 2.

Year 1 principal	Year 2 principal	Number of principals
Yes	Yes	11
Yes	No	8
No	Yes	8

NPS has undertaken specific actions to strengthen implementation of the Striving Readers whole-school intervention in year 3. Most importantly, NPS hired a Project Manager in January 2008, after a 7 month search for a qualified candidate. Some of the barriers to implementation outlined above might have been mitigated if this position had been filled before to the 2007 summer institutes. In fact, once this position was filled, communication with principals and teachers improved tremendously. The Project Manager has ensured that all staff are aware of which trainings teachers should be attending. Additionally, new sign-in sheets at whole-group trainings have been used to both track attendance and also to make certain that teachers are attending the correct training. Furthermore, prior to January 2008, it was difficult for NPS to monitor the amount of in-school coaching provided to specific teachers by the curriculum partners. To overcome this challenge, the Project Manager created the In-School Professional Development Form (Appendix B) to track the provision of these services. The form continues to be used in year 3.

Although significant steps have also been taken in year 3 to improve implementation of the whole-school intervention, some serious challenges remain.

IV.D Year 1 – Year 2 Implementation

IV.D1 NJCU Participation Changes Between Year 1 and Year 2

Overall, teacher participation in whole-group trainings declined between years 1 and 2. For example, in year 1, some 29 percent of teachers fully participated in year 1 whole-group trainings, as compared to only 2 percent in year 2. However, full participation was harder to achieve in year 2 due to the addition of two whole-group sessions during the school year. In order to achieve full participation, teachers had to attend all three trainings; the summer institute and the two school-year trainings. During year 1, NJCU held a summer institute, and the two sessions during the school year were make-up sessions. Some teachers that attended the year 1 training may not have seen the added value of attending the year 2 training. Feedback received from the focus groups revealed that many teachers found the summer training to be a repeat of the previous year's training. It is possible that other teachers felt this way and decided not to attend the year 2 trainings.

Despite the decline in participation in whole-group trainings, there was an increase in the in-school coaching visits. It is important to note that in year 1, the expected number of in-school coaching

visits made by NJCU staff was five visits per school. In year 2, this number was doubled. In year 1, 11 schools received five visits, but 4 schools received no coaching visits. In year 2, some 16 schools reached or exceeded the expected 10 in-school coaching visits, and only 1 school did not receive any coaching visits. On average in year 2, schools received 9.26 coaching visits compared to 3.55 in year 1.

IV.D2 NUA Participation Changes Between Year 1 and Year 2

In regard to the NUA trainings, little change occurred in participation between years 1 and 2. Overall, the percentage of teachers who had either full or moderate participation did not change between years 1 and 2. However, the percentage of teachers who did not participate at all declined. In year 1, a total of 37.2 percent of teachers did not attend any NUA trainings. In year 2, only 26.6 percent of eligible teachers did not attend any NUA trainings. The average number of in-school coaching visits also did not change between years 1 and 2. However, on average, teachers received an extra hour of coaching time (15.23 hours) as compared to year 1 (14.2 hours).

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Appendix A
READ 180 Pacing Guide

READ 180 MASTER LAYOUT

6th Grade [Year 1]	7th Grade [Year 2]	8th Grade [Year 3]
rBook Workshop 1 The New Americans Skill: Main Idea & Detail Writing Focus: Expository Writing	**rBook** Workshop 7 Alien Invaders Skill: Cause and Effect Writing Focus: Persuasive Writing	**rBook Flex** Workshop 4 Crime Lab Science Skill: Summarize Writing Focus: Expository Summary
rBook Workshop 2 When Disaster Strikes Skill: Sequence of Events Writing Focus: Narrative Writing	**rBook** Workshop 8 Turning Points Skill: Compare and Contrast Writing Focus: Descriptive Writing	**rBook Flex** Workshop 5 Wired for Trouble Skill: Fact and Opinion Writing Focus: Persuasive Writing
rBook Workshop 3 Identity Crisis Skill: Story Elements Writing Focus: Literature Response	**rBook** Workshop 9 The Streets of Harlem Skill: Make Inferences Writing Focus: Personal Narrative	**rBook Flex** Workshop 6 Facing the Elements Skill: Story Elements Writing Focus: Literature Review
rBook Workshop 4 Stolen Childhoods Skill: Summarize Writing Focus: Expository Summary	**rBook Flex** Workshop 1 Eyes on the Graduation Prize Skill: Main Idea & Detail Writing Focus: Expository Writing	**rBook Flex** Workshop 7 Creatures of the Deep Skill: Cause and Effect Writing Focus: Descriptive Writing
rBook Workshop 5 Under Pressure Skill: Problem and Solution Writing Focus: Persuasive Writing	**rBook Flex** Workshop 2 Tsunami: Disaster of a Century Skill: Sequence of Events Writing Focus: Narrative Writing	**rBook Flex** Workshop 8 Going Global Skill: Compare and Contrast Writing Focus: Persuasive Writing
rBook Workshop 6 Poe: The Master of Horror Skill: Story Elements Writing Focus: Literature Review	**rBook Flex** Workshop 3 Long Journey to Justice Skill: Story Elements Writing Focus: Literature Response	**rBook Flex** Workshop 9 The Art of the Memoir Skill: Make Inferences Writing Focus: Personal Narrative

Appendix B

Measures

A1. Striving Readers In-School Professional Development Form

Striving Readers In-School Professional Development Form
SY 2008-2009

Curriculum Partner: _____ Date: _____

Name of Consultant/Mentor: _____ School: _____

Teacher Name (Please print)	Teacher Signature	Minutes	Format of Professional Development Please specifically describe the format (ex. workshop, demonstration lesson, in-class support, debriefing, etc.).	Content of Professional Development Please specifically describe the strategy and/or focus as they relate to fluency, vocabulary and comprehension.

Consultant/Mentor arrival time at school: _____

Consultant/Mentor departure time from school: _____ Administrator Signature: _____

Striving Readers RTC Visitation Log

Name: _____ **Date:** _____

Teacher: _____	Teacher: _____	Teacher: _____
Intervention: _____(TI or WSI)	Intervention: _____(TI or WSI)	Intervention: _____(TI or WSI)
Grade: _____ Time: _____	Grade: _____ Time: _____	Grade: _____ Time: _____
___ Coaching	___ Coaching	___ Coaching
___ Modeling	___ Modeling	___ Modeling
___ Conferencing w/ Teacher	___ Conferencing w/ Teacher	___ Conferencing w/ Teacher
___ Conferencing w/ Literacy Coach/Administrator (circle)	___ Conferencing w/ Literacy Coach/Administrator (circle)	___ Conferencing w/ Literacy Coach/Administrator (circle)
___ Analysis of student work	___ Analysis of student work	___ Analysis of student work
___ **NJCU:** _____	___ **NJCU:** _____	___ **NJCU:** _____
___ **NUA:** _____	___ **NUA:** _____	___ **NUA:** _____
___ Grade Level/LAL Content Meeting	___ Grade Level/LAL Content Meeting	___ Grade Level/LAL Content Meeting
___ Distribution of district material	___ Distribution of district material	___ Distribution of district material
Fluency	**Fluency**	**Fluency**
____ Readers' Theatre _____Read Aloud	____ Readers' Theatre _____Read Aloud	____ Readers' Theatre _____Read Aloud
____ Shared Reading _____Familiar Rereading	____ Shared Reading _____Familiar Rereading	____ Shared Reading _____Familiar Rereading
____ **Other:** _____	____ **Other:** _____	____ **Other:** _____
Vocabulary & Word Study	**Vocabulary & Word Study**	**Vocabulary & Word Study**
____ Concept Map ____ Greek/Latin Root Words	____ Concept Map ____ Greek/Latin Root Words	____ Concept Map ____ Greek/Latin Root Words
____ Words for the Day ____ Word Work/Word Sorts	____ Words for the Day ____ Word Work/Word Sorts	____ Words for the Day ____ Word Work/Word Sorts
____ **Other:** _____	____ **Other:** _____	____ **Other:** _____
Comprehension	**Comprehension**	**Comprehension**
___ Reciprocal Teaching _____Think Aloud	___ Reciprocal Teaching _____Think Aloud	___ Reciprocal Teaching _____Think Aloud
___ Response Journals ____ Strategy Lesson	___ Response Journals ____ Strategy Lesson	___ Response Journals ____ Strategy Lesson
___ **Other:** _____	___ **Other:** _____	___ **Other:** _____
Read 180	**Read 180**	**Read 180**
___ Whole Group ___ Small Group Instruction	___ Whole Group ___ Small Group Instruction	___ Whole Group ___ Small Group Instruction
___ Computer Station ___ Independent Reading	___ Computer Station ___ Independent Reading	___ Computer Station ___ Independent Reading
___ Analyzing **SAM** reports to drive instruction	___ Analyzing **SAM** reports to drive instruction	___ Analyzing **SAM** reports to drive instruction
___ **Other:** _____	___ **Other:** _____	___ **Other:** _____
Writing	**Writing**	**Writing**
____Writers' Workshop ____Rubrics	____Writers' Workshop ____Rubrics	____Writers' Workshop ____Rubrics
____Progressive Writing Walls ____ Other: _____	____Progressive Writing Walls ____ Other: _____	____Progressive Writing Walls ____ Other: _____

Comments: _____

School Name: _____ SY 2008-2009

Striving Readers RTC Visitation Log Name: _____ Date: _____

Follow-Up: *Teacher will*: _____
RTC will: _____

School Name: _____ SY 2008-2009

A3. Striving Readers Observation Tool

Striving Readers: Newark

CLASSROOM OBSERVATION PROTOCOL

Spring 2007

Observer name _____ Date of observation_____

School: _____ Obs. Start Time_____ End Time:_____

Teacher name: _____ Teacher gender: Female Male

Grade you are observing 6th 7th 8th combination

Adult present in the room *besides* the classroom teacher? Yes No

I. Physical Environment

1. Resources *(e.g., print materials, technology)*

1	2	3	4
Sparsely equipped			*Rich in resources*

2. Bulletin Boards and/or Walls *(e.g., student samples and word walls)*

1	2	3	4
Bare, or used solely for decorative purposes		*Rich with student work and content-relevant materials*	

3. Availability of Books

1	2	3	4
Few books available, and/or one reading level only		*Books plentiful, available, and for variety of reading levels*	

II. Materials/Technologies *Used* During Class Period by Students (*Please check all that apply.)*

1. Reading or discussion of print materials *(if yes, complete 1a-1c)*	Yes	☐	No	☐	
1a. Novels/Stories/Poems		Yes	☐	No	☐
1b. Textbook/Anthology		Yes	☐	No	☐
1c. Articles		Yes	☐	No	☐
2. Did students read text during this class period? *(if yes, complete 2a)*		Yes	☐	No	☐
2a. Are all students reading the same text?		Yes	☐	No	☐
3. Workbooks / worksheets		Yes	☐	No	☐
4. Video, film, tv		Yes	☐	No	☐
5. Writing in notebooks/journals		Yes	☐	No	☐
6. Computer use *(if yes, complete 6a-6c)*	Yes	☐	No	☐	
6a. Used for research (such as web searches)	Yes	☐	No	☐	
6b. Used for writing (MS Word)		Yes	☐	No	☐
6c. Used for reading instruction (specialty software)		Yes	☐	No	☐
7. Audio (*tape players, cd players; NOT teacher reading aloud*)	Yes	☐	No	☐	

III. Classroom Climate

To what extent do you agree or disagree with each of the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Instructional time was well structured; transitions were well defined	1	2	3	4	5
2. Participation of all students was actively encouraged by the teacher	1	2	3	4	5
3. This appeared to be a safe environment for struggling readers to learn in.	1	2	3	4	5
4. At the end of the class period, teacher summarized what was learned	1	2	3	4	5

5. There was a high level of critical thinking required by students	1	2	3	4	5

IV. Time Sampled Data *(Begin 1st row ten minutes after the official start time of class and then complete every 10 minutes)*

Time	% of student s engaged in task	Student Grouping *(refers to how students are working, not how seating is arranged)*	Instructional Codes *(Add a code of "T" if teacher is providing direct instruction or modeling; Add "S" if students are applying strategies on their own or with one another; Use both "T" and "S" if applicable)*				
1: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
2: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
3: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
4: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
5: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
6: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
7: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
8: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*
9: _____	<25% ☐ 25-50% ☐ 51-75% ☐ <75% ☐	Whole class ☐ Pairs ☐ Small group ☐ Individual ☐	*Vocabulary*	*Fluency*	*Comprehension*	*Writing*	*Other Activity*

Instruction codes

Vocabulary *Focus is on vocabulary development.*		***Fluency*** *Focus is on improving reading fluency*		***Comprehension*** *Focus is on improving student reading comprehension.*		***Writing*** *Students writing, or writing instruction is happening.*		***Other Activity*** *Describes other activities*	
Code	***Definition***	***Code***	***Definition***	***Code***	***Definition***	***Code***	***Definition***	***Code***	***Definition***
T-CC	Context Clue: Teacher directs students to look in rest of text to infer meaning of a word. Can inc. reading rest of the sentence and guessing what makes sense, or look at accompanying picture.	S-CR	Choral Reading: Groups of students read in unison. Passage may be read multiple times. Teacher may read along.	T-GO S-GO	Graphic Organizer: Teacher or students complete a pictorial representation of how ideas in text are connected and organized.	T-CW S-CW	Collaborative Writing: teachers and/or students work together to create stories, w teacher/student as the scribe	ADM	Administration: Teacher engaged in administrative tasks, such as grading papers
S-DIC	Dictionary use: Students look up unfamiliar words. Includes glossary provided by teacher, glossary in their textbook, a separate dictionary, or online dictionary.	S-PR	Paired Reading: Pairs of students take turns reading out loud.	S-KWL	K-W-L: "What I know, what I want to find out, what I learned." 3-column chart. Fill out K and W *before* reading and L *after* reading.	T-GW	Guided Writing: Teachers guide writing process through mini-lessons & conferences. Sometimes called writer's workshop	ASS	Assessment: Teacher and students engaged in testing
								S-COM	Computer: Computer use for research, writing or instruction
T-E	Etymology: Teacher discusses the history or origin of a word. Can involve identifying prefixes and suffixes.	S-RR	Repeated oral Reading: Same passage read aloud multiple times (by teacher and/or students) while others follow along.	T-MU	Monitoring Understanding: Teacher monitors by asking specific questions & encouraging students to monitor own understanding. May do this through a think aloud (add TA code). Does not inc. general questions, like "are there are any questions?"	S-JU	Journal Use: Students write in journals/blogs. A journal is usually in a separate notebook	S-COP	Cooperative: Students are working collaboratively in groups to discuss text. May inc. pair reading, reciprocal teaching, or other structured protocols around reading or discussing text. Peer or group editing add "W" to code/
T-GO	Graphic Organizer: Pictorial representation of how ideas in a text are connected & organized.	S-LT	Listening to Text: Students read along in a book while listening to the text.	T-MC S-MC	Making Connections: Teacher or students relate text to current events or to material already covered. T may do this through a think aloud (add TA code).	S-NT	Note Taking: Students are taking notes. If they are copying notes add – X to code	T-DIS	Discussion: Teacher is leading or moderating a class discussion. There is student to student interaction. Otherwise use LEC
T-PT	Pre-teaching: Discuss meaning of words *before* read text. Can involve discussing word & activating prior knowledge.	O-F	Other Fluency: Specify	S-P	Predictions: Students make predictions before, and at specified points during reading.	S-WP	Writing Process: Students work on planning, writing, revising or editing their text. Long term project	T-LEC	Lecture: Teacher talks most of the time. Students respond briefly to questions. Almost no student to student talk
T-WW S-WW	Word Wall: List of words related to unit posted on the wall & easily visible. Use of the word wall would inc adding new words, using words on wall to complete a task, or overtly referring to posted words			S-SM	Summarizing: *After* reading students use one of a number of strategies to create a summary.	S-QR	Question Response: Students respond to questions or prompts in writing – could be questions at the end of a text, from teacher, or on workbooks.	T-MOD	Modeling: Teacher demonstrates / models how to analyze a word, answer a question.
								T-TA	Think Aloud : Teacher describes their thought process to model how a strategy is used. Literally walks students through their personal thought process.
O-V	Other Vocabulary: Specify			T-TX	Text Structure: Explicitly teaching expository text structure. May inc how text is organized, id words in bold, & recognize signal words (eg "therefore"). T may do this through a think aloud (add TA code).	S-QW	Quick Writing: Meant to elicit connection or response to reading.	TRAN	Transition: No instruction is taking place because students are transitioning from one activity to another
				O-C	Other Comprehension: Specify	O-W	Other Writing: Specify	OTH	Other: Specify

VI. Student Questions

1. Ask a students if this was a typical class (if no, also ask for an example of how it was atypical). Record response here:

Student:

_____

_____

_____

Student gender: Male ☐ Female ☐

A4. Westat Fidelity Measure

Striving Readers: Newark

FIDELITY PROTOCOL

Spring 2007

Observer name _____ Date of observation_____

School: _____ Lesson Start Time_____ End Time:_____

Teacher name: _____ Teacher gender: Female Male

Grade you are observing 6th 7th 8th Mixed

students in class 10 minutes into the observation: _____ [# girls: _____ # boys_____]

of students tardy: _____

For how long did this READ 180 section meet today? ❍ < hour ❍ 60 – 89 min ❍ 90-95 min ❍ 96 min+

I. Classroom Organization, Materials, and Equipment

	Yes	No	NA
1. Room had a space designated for independent reading	❍	❍	
1a. Independent reading are has comfortable seating	❍	❍	❍
1b. Independent reading area has sufficient working cd players	❍	❍	❍
1c. Independent reading area has adequate paperback books	❍	❍	❍
2. Room had a space designated for small group instruction	❍	❍	
3. Room had a space designated for whole group instruction.	❍	❍	
4. Room had a space containing computer workstations.	❍	❍	
4a. There are at least five functioning computer workstations	❍	❍	❍
5. There is enough space for students to move easily between stations	❍	❍	❍
5. Room has a paperback library with books labeled by level	❍	❍	
6. Expectations for student performance & behavior are posted	❍	❍	

II. Instruction

Whole-Group Instruction Start time: _____ End time_____

1. Do the instructional activities involve a READ 180 rBook?

   ☐ Yes ☐ No

1b. What color is the cover of the rBook?

   ☐ Blue ☐ Green

2. Do all students have an rBook?

   ☐ Yes ☐ Some of them have rBooks ☐ No

3. Are students using their rBooks for writing responses to the teacher's questions and prompts?

   ☐ Yes ☐ Some of them are using rBooks ☐ No

4. Do the students work with any materials other than READ 180?

   ☐ Yes ☐ No

   ↓

   If yes, briefly describe the materials below: *(remember to ask teacher question 4 <u>at the end of class</u>)*

5. Does the teacher attempt to engage all students in the instructional activities by asking questions, providing prompts, and soliciting responses?

   ☐ Yes ☐ Teacher attempts to engage some students ☐ No

6. Does the teacher make explicit connections between the Whole-Group learning activities and the content or focus of the Small-Group instruction that will follow the Whole Group session?

   ☐ Yes ☐ No

Small-Group Instruction Start time: _____ End time_____

1. Do the instructional activities involve a READ 180 rBook?

   ☐ Yes ☐ No

2. Do all students have an rBook?

   ☐ Yes ☐ Some of them have rBooks ☐ No

3. Are students using their rBooks for writing responses to the teacher's questions and prompts?

   ☐ Yes ☐ Some of them are using rBooks ☐ No

4. Do the students work with any materials other than READ 180?

   ☐ Yes ☐ No

   If yes, briefly describe the materials below: *(remember to ask teacher question 4 <u>at the end of class</u>)*

5. Does the teacher attempt to engage all of the students in the small-group instructional activities by asking questions, providing prompts, and soliciting responses?

   ☐ Yes ☐ teacher attempts to engage some students ☐ No

6. Does the teacher provide explicit feedback on student work and their participation in small-group learning activities?

   ☐ Yes ☐ teacher provides feedback to some students ☐ No

7. Does the teacher make explicit connections between the Small-Group learning activities and those included in the earlier Whole-Group session?

☐ Yes ☐ No

Independent Reading time **Start time: _____** **End time_____**

1. Do students using the Audiobooks appear to be listening and following along with the text?

   ☐ Yes ☐ Some ☐ No ☐ No, because students are not using Audiobooks

2. Are students writing in reading logs or journals?

   ☐ Yes ☐ Some are writing in logs or journals ☐ No

Computer Rotation time **Start time: _____** **End time_____**

1. Do the students appear to be on task?

   ☐ Yes ☐ Some are on task ☐ No

2. Do any of the students appear to be having trouble using the computers?

   ☐ Yes, some are having trouble ☐ No

   If students have trouble, do they receive help quickly?

   ☐ Yes ☐ No

Whole-Group Wrap-Up time **Start time: _____** **End time_____**

1. Does the teacher review key points from the lesson?

   ☐ Yes ☐ No

2. Do students reflect on literacy or learning experiences?

   ☐ Yes ☐ No

III. Classroom Management

Based on the entire observation of the READ 180 class, answer the following questions.

1. Are expectations for rotations, student work, and behavior clear and explicit?

   ☐ Yes, as indicated by clear directions from the teacher

   ☐ Yes, as indicated by displays that are posted on classroom walls and elsewhere

   ☐ No

2. Is there disruptive behavior that interrupts the classroom instruction and student movement from one rotation to the next?

   ☐ Yes ☐ No

IV Teacher Questions

1. Were any students absent today? If so, how many students?

2. Are all of the students listed in SAM?

3. How often do students take the SRI?

4. <u>(ONLY ASK IF MATERIALS OTHER THAN RBOOK WERE USED IN WHOLE GROUP OR SMALL GROUP SESSION)</u> I noticed that you used some materials that were not READ 180 in whole group/small group. Why is that?

5. Was today a typical lesson? Did I observe anything that was unusual for your class?

Appendix B

Targeted Intervention – Student Outcomes: HLM Output

```
 Program:                      HLM 6 Hierarchical Linear and Nonlinear Modeling
 Authors:                      Stephen Raudenbush, Tony Bryk, & Richard Congdon
 Publisher:                    Scientific Software International, Inc. (c) 2000
                                                        techsupport@ssicentral.com
                                                                www.ssicentral.com
 ------------------------------------------------------------------------------
 Module:      HLM2.EXE (6.06.2857.2)
 Date:        12 December 2008, Friday
 Time:        14:54:29
 ------------------------------------------------------------------------------


 SPECIFICATIONS FOR THIS HLM2 RUN


  Problem Title: Vocab_Overall

  The data source for this run  = P:\Data Analysis\HLM\Data\MDM\Year
2\Treat1_6678Grade\Overall.mdm
  The command file for this run = P:\Data Analysis\HLM\Models\Year
2\Treat1_6678Grade\Vocab_Overall.hlm
  Output file name              = P:\Data Analysis\HLM\Models\Year
2\Treat1_6678Grade\Vocab_Overall.txt
  The maximum number of level-1 units = 1772
  The maximum number of level-2 units = 19
  The maximum number of iterations = 100
  Method of estimation: restricted maximum likelihood

 Weighting Specification
 -----------------------
                          Weight
                          Variable
            Weighting?    Name        Normalized?
 Level 1        no
 Level 2        no
 Precision      no

  The outcome variable is    VOCAB

  The model specified for the fixed effects was:
 ----------------------------------------------------


   Level-1                  Level-2
   Coefficients             Predictors
 ----------------------   ---------------
         INTRCPT1, B0      INTRCPT2, G00
                              TREAT, G01
$                            NELGIBLE, G02
$                            YRIMPROV, G03
$                                NELL, G04
$                             NSPECED, G05
$                            MEANSCHO, G06
#%   GENDER slope, B1       INTRCPT2, G10
#%      LEP slope, B2       INTRCPT2, G20
```

```
#%   SPECED slope, B3      INTRCPT2, G30
#% SUPPREAD slope, B4      INTRCPT2, G40
#%  RDUMBLK slope, B5      INTRCPT2, G50
#%    GDUM6 slope, B6      INTRCPT2, G60
#%    GDUM7 slope, B7      INTRCPT2, G70
#%    GDUM8 slope, B8      INTRCPT2, G80
#% SCORENJS slope, B9      INTRCPT2, G90

'#' - The residual parameter variance for this level-1 coefficient has been set
      to zero.
'%' - This level-1 predictor has been centered around its grand mean.
'$' - This level-2 predictor has been centered around its grand mean.

 The model specified for the covariance components was:
 ------------------------------------------------------

         Sigma squared (constant across level-2 units)

         Tau dimensions
               INTRCPT1


 Summary of the model specified (in equation format)
 ---------------------------------------------------

Level-1 Model

      Y = B0 + B1*(GENDER) + B2*(LEP) + B3*(SPECED) + B4*(SUPPREAD) + B5*(RDUMBLK)
+ B6*(GDUM6) + B7*(GDUM7) + B8*(GDUM8) + B9*(SCORENJS) + R

Level-2 Model
      B0 = G00 + G01*(TREAT) + G02*(NELGIBLE) + G03*(YRIMPROV) + G04*(NELL)
         + G05*(NSPECED) + G06*(MEANSCHO) + U0
      B1 = G10
      B2 = G20
      B3 = G30
      B4 = G40
      B5 = G50
      B6 = G60
      B7 = G70
      B8 = G80
      B9 = G90

Run-time deletion has reduced the number of level-1 records to 1495


Iterations stopped due to small change in likelihood function

******* ITERATION 6 *******

 Sigma_squared =    668.03680
```

```
Tau
INTRCPT1,B0     18.01553
Tau (as correlations)
INTRCPT1,B0  1.000

-------------------------------------------------
 Random level-1 coefficient   Reliability estimate
-------------------------------------------------
 INTRCPT1, B0                         0.645
-------------------------------------------------

The value of the likelihood function at iteration 6 = -6.973489E+003

 The outcome variable is    VOCAB

 Final estimation of fixed effects:
 ----------------------------------------------------------------------------
                                    Standard             Approx.
   Fixed Effect         Coefficient   Error      T-ratio   d.f.     P-value
 ----------------------------------------------------------------------------
 For       INTRCPT1, B0
    INTRCPT2, G00         615.439342   1.835680   335.265        12    0.000
       TREAT, G01           2.516955   2.553619     0.986        12    0.344
    NELGIBLE, G02          -0.024620   0.077052    -0.320        12    0.755
    YRIMPROV, G03          -0.693256   1.033758    -0.671        12    0.515
        NELL, G04          -0.053837   0.107864    -0.499        12    0.626
     NSPECED, G05           0.072737   0.144489     0.503        12    0.623
    MEANSCHO, G06           0.467369   0.569224     0.821        12    0.428
 For   GENDER slope, B1
    INTRCPT2, G10           3.357606   1.365504     2.459      1479    0.014
 For      LEP slope, B2
    INTRCPT2, G20          -1.920876   2.641382    -0.727      1479    0.467
 For   SPECED slope, B3
    INTRCPT2, G30          -9.143588   1.547505    -5.909      1479    0.000
 For SUPPREAD slope, B4
    INTRCPT2, G40           0.433737   2.106121     0.206      1479    0.837
 For  RDUMBLK slope, B5
    INTRCPT2, G50           0.156158   1.761748     0.089      1479    0.930
 For    GDUM6 slope, B6
    INTRCPT2, G60           0.669147   1.888665     0.354      1479    0.723
 For    GDUM7 slope, B7
    INTRCPT2, G70          24.076869   1.999428    12.042      1479    0.000
 For    GDUM8 slope, B8
    INTRCPT2, G80          36.675619   1.935983    18.944      1479    0.000
 For SCORENJS slope, B9
    INTRCPT2, G90           6.389010   0.744903     8.577      1479    0.000
 ----------------------------------------------------------------------------

 The outcome variable is    VOCAB
```

Final estimation of fixed effects
(with robust standard errors)

Fixed Effect	Coefficient	Standard Error	T-ratio	Approx. d.f.	P-value
For INTRCPT1, B0					
INTRCPT2, G00	615.439342	1.286960	478.212	12	0.000
TREAT, G01	2.516955	1.684465	1.494	12	0.161
NELGIBLE, G02	-0.024620	0.049278	-0.500	12	0.626
YRIMPROV, G03	-0.693256	0.839395	-0.826	12	0.425
NELL, G04	-0.053837	0.058115	-0.926	12	0.373
NSPECED, G05	0.072737	0.110399	0.659	12	0.522
MEANSCHO, G06	0.467369	0.457159	1.022	12	0.327
For GENDER slope, B1					
INTRCPT2, G10	3.357606	1.590198	2.111	1479	0.035
For LEP slope, B2					
INTRCPT2, G20	-1.920876	2.129424	-0.902	1479	0.367
For SPECED slope, B3					
INTRCPT2, G30	-9.143588	1.694196	-5.397	1479	0.000
For SUPPREAD slope, B4					
INTRCPT2, G40	0.433737	1.961782	0.221	1479	0.825
For RDUMBLK slope, B5					
INTRCPT2, G50	0.156158	1.686394	0.093	1479	0.927
For GDUM6 slope, B6					
INTRCPT2, G60	0.669147	1.686394	0.397	1479	0.691
For GDUM7 slope, B7					
INTRCPT2, G70	24.076869	2.037620	11.816	1479	0.000
For GDUM8 slope, B8					
INTRCPT2, G80	36.675619	2.841695	12.906	1479	0.000
For SCORENJS slope, B9					
INTRCPT2, G90	6.389010	0.695062	9.192	1479	0.000

The robust standard errors are appropriate for datasets having a moderate to large number of level 2 units. These data do not meet this criterion.

Final estimation of variance components:

Random Effect		Standard Deviation	Variance Component	df	Chi-square	P-value
INTRCPT1, level-1,	U0	4.24447	18.01553	12	34.94879	0.001
	R	25.84641	668.03680			

Statistics for current covariance components model

Deviance = 13946.978758
Number of estimated parameters = 2

Appendix C

Targeted Intervention – Student Outcomes: Detailed Tables

C1. Analysis Group 1 – Vocabulary -- Year 1 6-8th Grades and Year 2 6th Grade combined

Table 1. Vocabulary – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	615.44	1.29	12	478.21	0.000
Treatment (S)	2.52	1.68	12	1.49	0.161
Num eligible students (S)	-0.02	0.05	12	-0.50	0.626
Yr in need of improvement (S)	-0.69	0.84	12	-0.83	0.425
Num. ELL students (S)	-0.05	0.06	12	-0.93	0.373
Num. Special Education students (S)	0.07	0.11	12	0.66	0.522
Mean score of schools (S)	0.47	0.46	12	1.02	0.327
GENDER	3.36	1.59	1479	2.11	0.035
English Language Learners	-1.92	2.13	1479	-0.90	0.367
Special Education student	-9.14	1.69	1479	-5.40	0.000
Rec'd supplemental reading instruct	0.43	1.96	1479	0.22	0.825
African-American	0.16	1.69	1479	0.09	0.927
Grade 6	0.67	1.69	1479	0.40	0.691
Grade 7	24.08	2.04	1479	11.82	0.000
Grade 8	36.68	2.84	1479	12.91	0.000
Baseline NJ score	6.39	0.70	1479	9.19	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	18.02	0.026
Level-1 Residual	Student	668.04	

Table 2. Vocabulary – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	614.01	1.63	12	377.79	0.000
Treatment (S)	3.73	2.83	12	1.32	0.212
Num eligible students (S)	-0.09	0.09	12	-1.03	0.324
Yr in need of improvement (S)	0.09	1.27	12	0.07	0.945
Num. ELL students (S)	-0.05	0.09	12	-0.58	0.572
Num. Special Education students (S)	0.22	0.17	12	1.36	0.201
Mean score of schools (S)	1.09	0.68	12	1.60	0.135
English Language Learners	-1.21	3.05	660	-0.40	0.691
Special Education student	-8.80	1.96	660	-4.50	0.000
Rec'd supplemental reading instruct	-0.12	3.13	660	-0.04	0.971
African-American	1.16	1.68	660	0.69	0.493
Grade 6	0.06	1.89	660	0.03	0.974
Grade 7	25.23	3.15	660	8.00	0.000
Grade 8	40.14	5.67	660	7.08	0.000
Baseline NJ score	6.77	1.51	660	4.48	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	37.29	0.051
Level-1 Residual	Student	688.37	

Table 3. Vocabulary – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	616.43	1.63	12	377.85	0.000
Treatment (S)	2.09	1.86	12	1.12	0.283
Num eligible students (S)	0.03	0.04	12	0.80	0.440
Yr in need of improvement (S)	-1.29	0.81	12	-1.60	0.136
Num. ELL students (S)	-0.04	0.06	12	-0.73	0.480
Num. Special Education students (S)	-0.06	0.09	12	-0.65	0.529
Mean score of schools (S)	-0.13	0.42	12	-0.31	0.759
English Language Learners	-1.73	3.05	805	-0.57	0.571
Special Education student	-9.64	2.06	805	-4.67	0.000
Rec'd supplemental reading instruct	1.17	1.88	805	0.62	0.534
African-American	-0.22	2.62	805	-0.08	0.933
Grade 6	1.77	2.18	805	0.81	0.418
Grade 7	23.28	2.17	805	10.73	0.000
Grade 8	34.08	2.03	805	16.77	0.000
Baseline NJ score	6.25	0.77	805	8.06	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	12.46	0.019
Level-1 Residual	Student	648.37	

Table 4. Vocabulary – African-American

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	616.45	1.55	12	396.70	0.000
Treatment (S)	2.82	1.93	12	1.46	0.169
Num eligible students (S)	-0.04	0.06	12	-0.68	0.509
Yr in need of improvement (S)	0.30	1.02	12	0.30	0.773
Num. ELL students (S)	0.02	0.08	12	0.27	0.790
Num. Special Education students (S)	0.06	0.12	12	0.49	0.630
Mean score of schools (S)	0.77	0.43	12	1.79	0.099
GENDER	2.26	1.98	834	1.14	0.255
English Language Learners	-0.35	5.46	834	-0.06	0.950
Special Education student	-8.04	2.25	834	-3.57	0.001
Rec'd supplemental reading instruct	1.39	2.36	834	0.59	0.555
Grade 6	0.59	2.29	834	0.26	0.797
Grade 7	24.55	3.05	834	8.06	0.000
Grade 8	35.49	3.05	834	11.64	0.000
Baseline NJ score	6.77	1.05	834	6.48	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	19.84	0.029
Level-1 Residual	Student	670.81	

Table 5. Vocabulary – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	617.72	2.72	9	227.22	0.000
Treatment (S)	0.14	3.32	9	0.04	0.967
Num eligible students (S)	0.13	0.09	9	1.44	0.183
Yr in need of improvement (S)	-2.65	0.92	9	-2.88	0.019
Num. ELL students (S)	-0.30	0.13	9	-2.40	0.040
Num. Special Education students (S)	-0.19	0.16	9	-1.19	0.263
Mean score of schools (S)	-1.40	0.65	9	-2.15	0.060
GENDER	4.38	2.67	605	1.64	0.101
English Language Learners	-1.02	2.21	605	-0.46	0.646
Special Education student	-10.07	1.46	605	-6.88	0.000
Rec'd supplemental reading instruct	-0.51	3.91	605	-0.13	0.896
Grade 6	1.22	2.46	605	0.50	0.619
Grade 7	23.56	2.54	605	9.29	0.000

Grade 8		38.95	3.93	605	9.90	0.000
Baseline NJ score		6.06	0.97	605	6.26	0.000
Random Effects						
Variance Components		**Estimate**			**ICC**	
Level-2 Random Intercept	School	20.50			0.030	
Level-1 Residual	Student	670.45				

Table 6. Vocabulary – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	605.99	1.46	12	415.27	0.000
Treatment (S)	4.81	2.10	12	2.29	0.041
Num eligible students (S)	0.09	0.04	12	2.14	0.053
Yr in need of improvement (S)	-1.28	0.96	12	-1.33	0.209
Num. ELL students (S)	-0.10	0.05	12	-1.82	0.093
Num. Special Education students (S)	-0.20	0.08	12	-2.32	0.038
Mean score of schools (S)	-0.52	0.62	12	-0.84	0.417
GENDER	2.69	2.29	595	1.17	0.242
English Language Learners	-5.03	3.36	595	-1.50	0.134
Rec'd supplemental reading instruct	-2.41	3.13	595	-0.77	0.442
African-American	-0.99	1.41	595	-0.71	0.481
Grade 6	-0.99	2.93	595	-0.34	0.735
Grade 7	29.10	4.32	595	6.74	0.000
Grade 8	40.52	6.25	595	6.48	0.000
Baseline NJ score	5.77	0.73	595	7.90	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	10.38	0.014
Level-1 Residual	Student	719.05	

C2. Analysis Group 2 – Vocabulary -- Year 1 6th Grade and Year 2 6th Grade combined

Table 7. Vocabulary – Overall

Fixed Effects					
Effect	**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept	600.29	1.48	12	406.21	0.000
Treatment (S)	3.06	2.00	12	1.53	0.152
Num eligible students (S)	-0.02	0.05	12	-0.52	0.615
Yr in need of improvement (S)	0.00	0.79	12	-0.01	0.995
Num. ELL students (S)	0.07	0.06	12	1.10	0.292
Num. Special Education students (S)	0.01	0.09	12	0.08	0.938
Mean score of schools (S)	0.40	0.43	12	0.91	0.380
Males	5.75	2.11	761	2.73	0.007
English Language Learners	0.64	3.14	761	0.20	0.839
Special Education student	-11.71	2.40	761	-4.89	0.000
Rec'd supplemental reading instruct	-0.59	2.60	761	-0.23	0.820
African-American	2.09	1.92	761	1.08	0.279
Grade 6	0.95	1.63	761	0.58	0.561
Baseline NJ score	7.23	0.86	761	8.45	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	12.07		0.018	
Level-1 Residual	Student	642.87			

Table 8. Vocabulary – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	599.72	2.31	12	259.75	0.000
Treatment (S)	3.63	3.26	12	1.11	0.288
Num eligible students (S)	-0.12	0.07	12	-1.73	0.110
Yr in need of improvement (S)	0.72	1.07	12	0.67	0.515
Num. ELL students (S)	0.07	0.08	12	0.94	0.365
Num. Special Education students (S)	0.17	0.13	12	1.36	0.198
Mean score of schools (S)	0.95	0.73	12	1.30	0.218
English Language Learners	3.30	3.71	339	0.89	0.375
Special Education student	-13.57	2.92	339	-4.64	0.000
Rec'd supplemental reading instruct	-0.83	3.86	339	-0.22	0.829
African-American	2.90	3.44	339	0.84	0.400
Grade 6	-0.55	1.49	339	-0.37	0.711
Baseline NJ score	9.21	2.12	339	4.34	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	38.95	0.058
Level-1 Residual	Student	627.53	

Table 9. Vocabulary – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	601.37	2.18	12	275.93	0.000
Treatment (S)	2.34	2.57	12	0.91	0.381
Num eligible students (S)	0.06	0.06	12	1.01	0.335
Yr in need of improvement (S)	-0.60	0.78	12	-0.77	0.457
Num. ELL students (S)	0.03	0.07	12	0.46	0.657
Num. Special Education students (S)	-0.11	0.10	12	-1.05	0.313
Mean score of schools (S)	-0.02	0.43	12	-0.04	0.967
English Language Learners	-1.95	4.96	410	-0.39	0.694
Special Education student	-10.25	2.42	410	-4.24	0.000
Rec'd supplemental reading instruct	-0.40	3.99	410	-0.10	0.920
African-American	1.17	2.85	410	0.41	0.680
Grade 6	2.14	2.21	410	0.97	0.334
Baseline NJ score	6.40	1.01	410	6.32	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	6.51	0.010
Level-1 Residual	Student	650.56	

Table 10. Vocabulary - African-American

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		600.82	2.13	12	281.59	0.000
Treatment (S)		4.92	3.02	12	1.63	0.129
Num eligible students (S)		-0.03	0.06	12	-0.45	0.661
Yr in need of improvement (S)		0.87	1.19	12	0.73	0.481
Num. ELL students (S)		0.16	0.09	12	1.67	0.121
Num. Special Education students (S)		0.01	0.09	12	0.08	0.937
Mean score of schools (S)		0.47	0.60	12	0.78	0.449
Males		3.66	2.08	411	1.76	0.079
English Language Learners		2.56	6.95	411	0.37	0.712
Special Education student		-11.61	3.25	411	-3.57	0.001
Rec'd supplemental reading instruct		0.36	3.33	411	0.11	0.914
Grade 6		0.73	2.14	411	0.34	0.733
Baseline NJ score		6.21	1.51	411	4.10	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		25.04		0.037	
Level-1 Residual	Student		655.18			

Table 11. Vocabulary – Hispanic

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		603.91	2.41	8	251.05	0.000
Treatment (S)		-2.73	4.26	8	-0.64	0.540
Num eligible students (S)		0.08	0.09	8	0.87	0.408
Yr in need of improvement (S)		-0.93	0.58	8	-1.60	0.148
Num. ELL students (S)		-0.18	0.14	8	-1.27	0.239
Num. Special Education students (S)		-0.13	0.13	8	-1.03	0.335
Mean score of schools (S)		-1.07	0.32	8	-3.28	0.012
Males		6.97	3.59	320	1.94	0.053
English Language Learners		1.96	3.25	320	0.60	0.547
Special Education student		-11.66	1.94	320	-6.00	0.000
Rec'd supplemental reading instruct		0.42	4.17	320	0.10	0.921
Grade 6		1.78	2.55	320	0.70	0.485
Baseline NJ score		8.46	1.38	320	6.13	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		13.11		0.020	
Level-1 Residual	Student		636.16			

Table 12. Vocabulary - Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	590.51	2.18	12	271.29	0.000
Treatment (S)	5.46	3.31	12	1.65	0.124
Num eligible students (S)	-0.06	0.07	12	-0.86	0.410
Yr in need of improvement (S)	-0.17	1.01	12	-0.17	0.866
Num. ELL students (S)	0.14	0.10	12	1.34	0.206
Num. Special Education students (S)	0.00	0.12	12	-0.02	0.983
Mean score of schools (S)	-0.54	0.80	12	-0.68	0.512
Males	8.36	2.00	324	4.18	0.000
English Language Learners	-3.96	4.21	324	-0.94	0.347
Rec'd supplemental reading instruct	-2.97	5.79	324	-0.51	0.608
African-American	-0.13	2.37	324	-0.06	0.956
Grade 6	-0.96	2.68	324	-0.36	0.720
Baseline NJ score	5.99	1.12	324	5.36	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	43.99	0.070
Level-1 Residual	Student	586.07	

C3. Analysis Group 3 – Vocabulary -- Year 2 7th Grade

Table 13. Vocabulary – Overall

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	621.01	1.89	12	329.37	0.000
Treatment (S)	3.68	2.41	12	1.53	0.153
Num eligible students (S)	0.06	0.06	12	1.00	0.339
Yr in need of improvement (S)	-0.38	0.94	12	-0.41	0.690
Num. ELL students (S)	0.09	0.11	12	0.81	0.433
Num. Special Education students (S)	-0.09	0.13	12	-0.64	0.536
Mean score of schools (S)	-0.13	0.48	12	-0.27	0.790
Males	-0.03	2.17	395	-0.02	0.988
Eligible free/reduced lunch	-2.41	3.75	395	-0.64	0.521
English Language Learners	-5.99	5.25	395	-1.14	0.255
Special Education student	-6.74	2.06	395	-3.27	0.002
Rec'd supplemental reading instruct	1.58	3.56	395	0.45	0.656
African-American	0.64	2.34	395	0.27	0.785
Baseline NJ score	9.97	1.01	395	9.92	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	17.97		0.034	
Level-1 Residual	Student	515.76			

Table 14. Vocabulary – Female

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		622.71	1.60	12	388.25	0.000
Treatment (S)		-0.48	2.53	12	-0.19	0.853
Num eligible students (S)		0.13	0.05	12	2.52	0.027
Yr in need of improvement (S)		0.07	0.73	12	0.10	0.924
Num. ELL students (S)		-0.10	0.13	12	-0.78	0.453
Num. Special Education students (S)		-0.03	0.09	12	-0.31	0.762
Mean score of schools (S)		1.07	0.53	12	2.03	0.065
Eligible free/reduced lunch		0.21	3.73	183	0.06	0.955
English Language Learners		0.12	4.23	183	0.03	0.978
Special Education student		-5.78	3.37	183	-1.72	0.088
Rec'd supplemental reading instruct		2.04	4.98	183	0.41	0.682
African-American		0.52	4.01	183	0.13	0.897
Baseline NJ score		8.86	1.39	183	6.35	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		0.53		0.001	
Level-1 Residual	Student		480.28			

Table15. Vocabulary – Male

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		617.92	2.25	12	274.31	0.000
Treatment (S)		8.75	3.23	12	2.71	0.019
Num eligible students (S)		0.03	0.10	12	0.26	0.800
Yr in need of improvement (S)		-1.87	1.30	12	-1.44	0.175
Num. ELL students (S)		0.26	0.11	12	2.24	0.045
Num. Special Education students (S)		-0.19	0.20	12	-0.95	0.361
Mean score of schools (S)		-1.17	0.58	12	-2.02	0.066
Eligible free/reduced lunch		-5.39	6.40	200	-0.84	0.401
English Language Learners		-19.22	8.40	200	-2.29	0.023
Special Education student		-8.74	3.36	200	-2.60	0.010
Rec'd supplemental reading instruct		7.83	5.06	200	1.55	0.123
African-American		1.48	4.95	200	0.30	0.765
Baseline NJ score		11.34	1.57	200	7.22	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		21.50		0.038	
Level-1 Residual	Student		543.58			

Table 16. Vocabulary - African-American

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		621.47	2.71	12	229.44	0.000
Treatment (S)		4.46	3.66	12	1.22	0.247
Num eligible students (S)		0.10	0.10	12	1.02	0.328
Yr in need of improvement (S)		0.86	1.53	12	0.56	0.583
Num. ELL students (S)		0.17	0.15	12	1.18	0.260
Num. Special Education students (S)		-0.12	0.18	12	-0.67	0.514
Mean score of schools (S)		0.07	0.73	12	0.10	0.923
Males		1.06	3.22	206	0.33	0.742
Eligible free/reduced lunch		-1.69	4.19	206	-0.40	0.687
English Language Learners		-22.60	25.08	206	-0.90	0.369
Special Education student		-4.81	3.75	206	-1.28	0.201
Rec'd supplemental reading instruct		1.68	9.59	206	0.18	0.861
Baseline NJ score		9.35	1.77	206	5.29	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		6.69		0.013	
Level-1 Residual	Student		521.01			

Table 17. Vocabulary - Hispanic

Fixed Effects						
Effect		Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept		621.69	5.10	7	121.84	0.000
Treatment (S)		5.45	8.45	7	0.64	0.540
Num eligible students (S)		0.06	0.17	7	0.37	0.725
Yr in need of improvement (S)		-1.37	1.56	7	-0.88	0.410
Num. ELL students (S)		-0.05	0.32	7	-0.16	0.876
Num. Special Education students (S)		-0.15	0.36	7	-0.42	0.685
Mean score of schools (S)		-1.32	1.20	7	-1.10	0.309
Males		-2.14	3.88	171	-0.55	0.582
Eligible free/reduced lunch		-2.18	7.16	171	-0.30	0.762
English Language Learners		-4.94	5.75	171	-0.86	0.391
Special Education student		-7.83	3.02	171	-2.59	0.011
Rec'd supplemental reading instruct		1.91	10.75	171	0.18	0.859
Baseline NJ score		10.94	1.40	171	7.81	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		85.87		0.139	
Level-1 Residual	Student		530.02			

Table 18. Vocabulary - Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	612.10	2.14	11	286.22	0.000
Treatment (S)	6.07	3.54	11	1.72	0.114
Num eligible students (S)	0.04	0.09	11	0.50	0.627
Yr in need of improvement (S)	-0.38	0.96	11	-0.40	0.700
Num. ELL students (S)	0.21	0.12	11	1.77	0.104
Num. Special Education students (S)	-0.13	0.12	11	-1.09	0.298
Mean score of schools (S)	0.11	0.48	11	0.23	0.824
Males	-0.36	2.64	160	-0.14	0.893
Eligible free/reduced lunch	-4.82	6.86	160	-0.70	0.483
English Language Learners	5.43	6.83	160	0.80	0.428
Rec'd supplemental reading instruct	3.27	3.81	160	0.86	0.393
African-American	3.49	3.20	160	1.09	0.277
Baseline NJ score	8.50	1.76	160	4.83	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	4.11	0.007
Level-1 Residual	Student	553.94	

C4. Analysis Group 4 –Vocabulary -- Year 2 8th Grade

Table 19. Vocabulary –Overall

Fixed Effects						
Effect		**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept		642.56	2.10	12	306.33	0.000
Treatment (S)		-0.47	2.57	12	-0.18	0.859
Num eligible students (S)		-0.07	0.05	12	-1.37	0.195
Yr in need of improvement (S)		-1.41	1.16	12	-1.21	0.249
Num. ELL students (S)		0.03	0.06	12	0.54	0.602
Num. Special Education students (S)		0.02	0.11	12	0.16	0.873
Mean score of schools (S)		-0.52	0.65	12	-0.81	0.436
Males		5.08	3.55	336	1.43	0.154
Eligible free/reduced lunch		-4.37	5.58	336	-0.78	0.435
English Language Learners		-1.62	6.14	336	-0.26	0.792
Special Education student		-6.15	3.78	336	-1.63	0.104
Rec'd supplemental reading instruct		2.22	9.51	336	0.23	0.815
African-American		3.59	2.15	336	1.67	0.095
Baseline NJ score		9.37	1.56	336	5.99	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		27.85		0.044	
Level-1 Residual	Student		599.13			

Table 20. Vocabulary – Female

Fixed Effects						
Effect		**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept		646.71	2.98	12	217.29	0.000
Treatment (S)		-6.08	5.79	12	-1.05	0.316
Num eligible students (S)		-0.15	0.15	12	-0.95	0.361
Yr in need of improvement (S)		-0.01	2.37	12	0.00	0.998
Num. ELL students (S)		-0.12	0.25	12	-0.48	0.643
Num. Special Education students (S)		0.22	0.30	12	0.72	0.488
Mean score of schools (S)		0.26	1.28	12	0.20	0.844
Eligible free/reduced lunch		8.35	6.18	157	1.35	0.179
English Language Learners		-5.80	7.59	157	-0.76	0.446
Special Education student		-1.20	5.42	157	-0.22	0.825
Rec'd supplemental reading instruct		-14.81	6.49	157	-2.28	0.024
African-American		0.52	3.05	157	0.17	0.865
Baseline NJ score		6.93	1.39	157	5.01	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		157.34		0.294	
Level-1 Residual	Student		377.27			

Table 21. Vocabulary – Male

Fixed Effects						
Effect		**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept		638.43	3.02	12	211.43	0.000
Treatment (S)		4.78	3.98	12	1.20	0.253
Num eligible students (S)		0.07	0.14	12	0.50	0.625
Yr in need of improvement (S)		-3.18	2.16	12	-1.47	0.167
Num. ELL students (S)		0.11	0.19	12	0.60	0.561
Num. Special Education students (S)		-0.28	0.25	12	-1.11	0.287
Mean score of schools (S)		-1.68	0.97	12	-1.74	0.107
Eligible free/reduced lunch		-12.65	7.13	167	-1.78	0.077
English Language Learners		-3.44	6.29	167	-0.55	0.585
Special Education student		-7.27	5.48	167	-1.33	0.187
Rec'd supplemental reading instruct		16.93	11.12	167	1.52	0.130
African-American		6.77	3.48	167	1.95	0.053
Baseline NJ score		10.03	2.27	167	4.41	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		40.93		0.055	
Level-1 Residual	Student		702.39			

Table 22. Vocabulary - African-American

Fixed Effects						
Effect		**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept		644.60	2.89	12	222.90	0.000
Treatment (S)		-3.29	3.89	12	-0.85	0.414
Num eligible students (S)		-0.10	0.11	12	-0.84	0.417
Yr in need of improvement (S)		-1.30	1.79	12	-0.73	0.482
Num. ELL students (S)		0.10	0.17	12	0.59	0.569
Num. Special Education students (S)		0.00	0.21	12	0.02	0.983
Mean score of schools (S)		-0.34	0.83	12	-0.41	0.689
Males		6.17	3.80	184	1.63	0.106
Eligible free/reduced lunch		-5.04	5.12	184	-0.98	0.327
English Language Learners		3.33	26.85	184	0.12	0.902
Special Education student		-7.06	4.33	184	-1.63	0.104
Rec'd supplemental reading instruct		7.93	13.05	184	0.61	0.544
Baseline NJ score		7.63	1.91	184	4.00	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		0.45		0.001	
Level-1 Residual	Student		652.67			

Table 23. Hispanic

Fixed Effects						
Effect		**Estimate**	**Standard Error**	**DF**	**t Value**	**Pr > |t|**
Intercept		639.66	4.44	7	144.09	0.000
Treatment (S)		6.35	5.87	7	1.08	0.315
Num eligible students (S)		-0.10	0.17	7	-0.61	0.561
Yr in need of improvement (S)		-2.05	2.01	7	-1.02	0.343
Num. ELL students (S)		-0.07	0.23	7	-0.29	0.780
Num. Special Education students (S)		0.10	0.39	7	0.26	0.803
Mean score of schools (S)		-1.44	1.69	7	-0.85	0.423
Males		2.82	3.47	134	0.81	0.419
Eligible free/reduced lunch		-7.12	10.55	134	-0.68	0.500
English Language Learners		1.32	8.45	134	0.16	0.876
Special Education student		-4.09	5.68	134	-0.72	0.473
Rec'd supplemental reading instruct		-2.90	6.25	134	-0.46	0.643
Baseline NJ score		12.39	1.87	134	6.63	0.000
Random Effects						
Variance Components			**Estimate**		**ICC**	
Level-2 Random Intercept	School		93.91		0.144	
Level-1 Residual	Student		559.98			

Table 24. Vocabulary - Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	630.53	5.10	10	123.61	0.000
Treatment (S)	4.08	6.88	10	0.59	0.566
Num eligible students (S)	-0.26	0.25	10	-1.05	0.321
Yr in need of improvement (S)	0.29	3.14	10	0.09	0.928
Num. ELL students (S)	0.14	0.33	10	0.42	0.683
Num. Special Education students (S)	0.42	0.47	10	0.89	0.396
Mean score of schools (S)	0.17	1.48	10	0.11	0.914
Males	1.29	4.94	113	0.26	0.795
Eligible free/reduced lunch	-1.88	7.59	113	-0.25	0.805
English Language Learners	-26.08	27.24	113	-0.96	0.341
Rec'd supplemental reading instruct	-1.58	18.85	113	-0.08	0.934
African-American	3.56	5.45	113	0.65	0.515
Baseline NJ score	13.35	2.24	113	5.95	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	56.74	0.083
Level-1 Residual	Student	629.87	

C5. Analysis Group 5 – Vocabulary -- Year 2 7th & 8th Grade

Table 25. Vocabulary – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	630.62	1.38	12	458.49	0.000
Treatment (S)	1.96	1.96	12	1.00	0.337
Num eligible students (S)	0.01	0.04	12	0.35	0.735
Yr in need of improvement (S)	-0.60	0.84	12	-0.72	0.488
Num. ELL students (S)	0.07	0.06	12	1.08	0.302
Num. Special Education students (S)	-0.06	0.09	12	-0.75	0.466
Mean score of schools (S)	-0.17	0.46	12	-0.37	0.716
Males	2.04	2.08	744	0.98	0.327
Eligible free/reduced lunch	-3.13	3.40	744	-0.92	0.357
English Language Learners	-4.17	2.32	744	-1.79	0.073
Special Education student	-6.61	2.24	744	-2.95	0.004
Rec'd supplemental reading instruct	1.94	4.24	744	0.46	0.647
African-American	1.72	1.96	744	0.88	0.380
Grade 8	16.72	2.48	744	6.74	0.000
Baseline NJ score	9.56	0.77	744	12.35	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	12.05	0.021
Level-1 Residual	Student	561.46	

Table 26. Vocabulary – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	633.54	1.31	12	482.55	0.000
Treatment (S)	-1.82	1.90	12	-0.96	0.356
Num eligible students (S)	-0.03	0.05	12	-0.61	0.556
Yr in need of improvement (S)	1.20	0.74	12	1.62	0.131
Num. ELL students (S)	-0.08	0.07	12	-1.07	0.307
Num. Special Education students (S)	0.13	0.10	12	1.40	0.188
Mean score of schools (S)	1.02	0.50	12	2.04	0.063
Eligible free/reduced lunch	2.29	3.54	352	0.65	0.519
English Language Learners	-2.76	3.55	352	-0.78	0.437
Special Education student	-4.30	2.76	352	-1.56	0.120
Rec'd supplemental reading instruct	-6.88	4.40	352	-1.57	0.118
African-American	-1.58	2.31	352	-0.68	0.494
Grade 8	15.24	4.17	352	3.66	0.001
Baseline NJ score	8.70	1.00	352	8.69	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	2.75		0.006	
Level-1 Residual	Student	478.59			

Table 27. Vocabulary – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	627.38	2.16	12	291.00	0.000
Treatment (S)	6.43	2.94	12	2.19	0.049
Num eligible students (S)	0.08	0.05	12	1.56	0.145
Yr in need of improvement (S)	-2.60	1.19	12	-2.18	0.050
Num. ELL students (S)	0.17	0.08	12	2.07	0.060
Num. Special Education students (S)	-0.30	0.14	12	-2.15	0.053
Mean score of schools (S)	-1.38	0.64	12	-2.18	0.050
Eligible free/reduced lunch	-8.71	4.49	379	-1.94	0.053
English Language Learners	-11.97	5.26	379	-2.28	0.023
Special Education student	-7.87	2.68	379	-2.94	0.004
Rec'd supplemental reading instruct	12.10	5.35	379	2.26	0.024
African-American	4.22	3.38	379	1.25	0.213
Grade 8	18.22	2.35	379	7.75	0.000
Baseline NJ score	10.62	1.43	379	7.41	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	24.63		0.039	

Level-1 Residual	Student	608.90

Table 28. Vocabulary – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	632.07	1.37	12	462.28	0.000
Treatment (S)	0.89	2.09	12	0.43	0.676
Num eligible students (S)	0.02	0.04	12	0.51	0.622
Yr in need of improvement (S)	0.17	0.99	12	0.17	0.870
Num. ELL students (S)	0.14	0.08	12	1.65	0.125
Num. Special Education students (S)	-0.08	0.06	12	-1.19	0.256
Mean score of schools (S)	0.04	0.32	12	0.11	0.914
Males	3.42	2.69	402	1.27	0.204
Eligible free/reduced lunch	-3.04	3.51	402	-0.87	0.387
English Language Learners	-10.32	12.73	402	-0.81	0.418
Special Education student	-5.80	3.19	402	-1.82	0.069
Rec'd supplemental reading instruct	2.72	6.98	402	0.39	0.697
Grade 8	19.63	2.49	402	7.87	0.000
Baseline NJ score	8.69	0.98	402	8.83	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	1.40		0.002	
Level-1 Residual	Student	586.62			

Table 29. Vocabulary – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	627.03	4.26	8	147.24	0.000
Treatment (S)	9.95	6.57	8	1.51	0.168
Num eligible students (S)	-0.05	0.16	8	-0.32	0.759
Yr in need of improvement (S)	-1.50	1.29	8	-1.16	0.280
Num. ELL students (S)	0.04	0.25	8	0.17	0.869
Num. Special Education students (S)	-0.03	0.34	8	-0.09	0.933
Mean score of schools (S)	-1.33	1.21	8	-1.10	0.305
Males	-0.20	2.43	317	-0.08	0.934
Eligible free/reduced lunch	-3.33	8.56	317	-0.39	0.697
English Language Learners	-2.96	2.81	317	-1.05	0.293
Special Education student	-6.74	2.67	317	-2.52	0.012
Rec'd supplemental reading instruct	-0.32	6.79	317	-0.05	0.963
Grade 8	13.03	3.12	317	4.18	0.000
Baseline NJ score	11.24	1.03	317	10.87	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	95.61		0.152	

Level-1 Residual	Student	533.80

Table 30. Vocabulary – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	619.59	2.33	11	265.71	0.000
Treatment (S)	5.48	3.65	11	1.50	0.161
Num eligible students (S)	-0.08	0.12	11	-0.67	0.515
Yr in need of improvement (S)	0.02	1.52	11	0.02	0.989
Num. ELL students (S)	0.21	0.14	11	1.50	0.161
Num. Special Education students (S)	0.07	0.18	11	0.37	0.720
Mean score of schools (S)	-0.14	0.67	11	-0.21	0.841
Males	-0.61	2.55	285	-0.24	0.812
Eligible free/reduced lunch	-4.29	6.13	285	-0.70	0.484
English Language Learners	4.54	7.48	285	0.61	0.544
Rec'd supplemental reading instruct	4.92	3.14	285	1.57	0.118
African-American	3.87	3.13	285	1.24	0.218
Grade 8	18.39	3.02	285	6.08	0.000
Baseline NJ score	10.50	1.26	285	8.31	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	43.75	0.070
Level-1 Residual	Student	577.44	

C6. Analysis Group 1 – Comprehension -- Year 1 6-8th Grades and Year 2 6th Grade combined

Table 31. Comprehension – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	610.57	0.99	12	616.78	0.000
Treatment (S)	2.09	2.03	12	1.03	0.324
Num eligible students (S)	-0.09	0.05	12	-2.03	0.065
Yr. in need of improvement (S)	-0.51	0.76	12	-0.67	0.515
Num. ELL students (S)	0.05	0.08	12	0.56	0.583
Num. Special Education students (S)	0.19	0.07	12	2.84	0.016
Mean score of schools (S)	0.50	0.44	12	1.16	0.269
Males	-2.42	1.11	1573	-2.19	0.029
English Language Learners	-2.39	1.97	1573	-1.21	0.227
Special Education student	-9.76	0.89	1573	-11.03	0.000
Rec'd supplemental reading instruct	0.00	1.73	1573	0.00	1.000
African-American	-2.03	1.43	1573	-1.42	0.155
Grade 6	-1.71	2.11	1573	-0.81	0.419
Grade 7	14.61	2.37	1573	6.15	0.000
Grade 8	34.03	1.63	1573	20.84	0.000
Baseline NJ score	5.24	0.83	1573	6.28	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	17.63	0.032
Level-1 Residual	Student	533.41	

Table 32. Comprehension – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	611.71	0.84	12	729.27	0.000
Treatment (S)	3.77	2.22	12	1.70	0.115
Num eligible students (S)	-0.14	0.05	12	-2.95	0.013
Yr. in need of improvement (S)	0.09	0.90	12	0.10	0.926
Num. ELL students (S)	0.15	0.06	12	2.33	0.038
Num. Special Education students (S)	0.23	0.07	12	3.21	0.008
Mean score of schools (S)	1.08	0.62	12	1.74	0.107
English Language Learners	0.47	2.52	694	0.19	0.851
Special Education student	-10.50	1.57	694	-6.69	0.000
Rec'd supplemental reading instruct	0.17	2.12	694	0.08	0.936
African-American	1.03	1.42	694	0.73	0.466
Grade 6	-0.39	3.44	694	-0.11	0.910
Grade 7	15.17	3.49	694	4.35	0.000
Grade 8	34.63	2.89	694	11.99	0.000
Baseline NJ score	4.85	0.93	694	5.19	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	17.09	0.033
Level-1 Residual	Student	502.90	

Table 33. Comprehension – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	609.81	1.60	12	381.60	0.000
Treatment (S)	0.81	2.28	12	0.35	0.729
Num eligible students (S)	-0.05	0.05	12	-1.04	0.319
Yr. in need of improvement (S)	-1.01	0.82	12	-1.22	0.246
Num. ELL students (S)	-0.05	0.10	12	-0.48	0.641
Num. Special Education students (S)	0.15	0.09	12	1.69	0.116
Mean score of schools (S)	0.08	0.37	12	0.22	0.827
English Language Learners	-4.80	2.39	865	-2.01	0.045
Special Education student	-9.17	0.95	865	-9.66	0.000
Rec'd supplemental reading instruct	0.25	2.74	865	0.09	0.927
African-American	-3.87	2.23	865	-1.74	0.083
Grade 6	-2.46	2.61	865	-0.94	0.347
Grade 7	14.21	2.61	865	5.45	0.000
Grade 8	33.65	2.65	865	12.68	0.000
Baseline NJ score	5.47	0.98	865	5.59	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	19.19	0.033
Level-1 Residual	Student	559.98	

Table 34. Comprehension – African-American

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	610.86	1.15	12	529.47	0.000
Treatment (S)	2.08	2.58	12	0.81	0.435
Num eligible students (S)	-0.08	0.06	12	-1.35	0.201
Yr. in need of improvement (S)	-0.56	0.99	12	-0.57	0.580
Num. ELL students (S)	0.09	0.08	12	1.08	0.301
Num. Special Education students (S)	0.16	0.08	12	1.97	0.072
Mean score of schools (S)	0.71	0.55	12	1.28	0.226
Males	-3.07	1.49	896	-2.07	0.039
English Language Learners	-12.33	12.75	896	-0.97	0.334
Special Education student	-7.95	1.58	896	-5.03	0.000
Rec'd supplemental reading instruct	0.65	1.50	896	0.43	0.665
Grade 6	-1.93	2.56	896	-0.75	0.451
Grade 7	14.62	3.22	896	4.54	0.000
Grade 8	32.84	2.44	896	13.48	0.000
Baseline NJ score	5.86	0.85	896	6.92	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	28.21	0.053
Level-1 Residual	Student	507.83	

Table 35. Comprehension – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	614.11	2.38	9	257.78	0.000
Treatment (S)	1.96	3.25	9	0.60	0.561
Num eligible students (S)	-0.13	0.05	9	-2.47	0.036
Yr. in need of improvement (S)	-1.29	0.56	9	-2.29	0.048
Num. ELL students (S)	-0.09	0.11	9	-0.82	0.432
Num. Special Education students (S)	0.24	0.09	9	2.78	0.022
Mean score of schools (S)	-0.94	0.36	9	-2.58	0.030
Males	-2.25	1.75	635	-1.28	0.200
English Language Learners	-1.41	1.83	635	-0.77	0.440
Special Education student	-12.31	1.50	635	-8.19	0.000
Rec'd supplemental reading instruct	0.56	3.22	635	0.18	0.861
Grade 6	-1.37	2.98	635	-0.46	0.645
Grade 7	14.77	2.41	635	6.13	0.000
Grade 8	35.49	2.02	635	17.59	0.000
Baseline NJ score	4.38	1.25	635	3.50	0.001

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.44	0.001
Level-1 Residual	Student	567.71	

Table 36. Comprehension – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	602.61	1.77	12	339.55	0.000
Treatment (S)	2.23	2.53	12	0.88	0.397
Num eligible students (S)	-0.04	0.07	12	-0.55	0.591
Yr. in need of improvement (S)	-0.03	0.72	12	-0.04	0.970
Num. ELL students (S)	0.04	0.11	12	0.42	0.685
Num. Special Education students (S)	0.07	0.11	12	0.59	0.568
Mean score of schools (S)	0.31	0.39	12	0.78	0.452
Males	-1.39	1.42	619	-0.98	0.327
English Language Learners	4.40	2.81	619	1.57	0.117
Rec'd supplemental reading instruct	0.46	2.89	619	0.16	0.873
African-American	0.25	2.60	619	0.10	0.925
Grade 6	3.00	2.21	619	1.36	0.175
Grade 7	16.26	3.29	619	4.94	0.000
Grade 8	35.86	2.06	619	17.45	0.000
Baseline NJ score	4.47	0.90	619	4.99	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	20.29	0.039
Level-1 Residual	Student	504.20	

C7. Analysis Group 2 – Comprehension -- Year 1 6th Grade and Year 2 6th Grade combined

Table 37. Comprehension – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	598.10	1.34	12	447.28	0.000
Treatment	2.86	2.55	12	1.12	0.285
Num Eligible Student (S)	-0.14	0.05	12	-2.80	0.017
Yr. in need of improvement (S)	0.49	1.06	12	0.46	0.651
Num. ELL student (S)	0.17	0.09	12	1.96	0.074
Num. Special Education students (S)	0.19	0.07	12	2.76	0.018
Mean score of schools (S)	0.85	0.61	12	1.39	0.189
Males	-2.90	1.95	795	-1.49	0.137
English Language Learners	0.99	2.16	795	0.46	0.646
Special Education student	-8.44	1.61	795	-5.25	0.000
Rec'd supplemental reading instruct	1.34	2.58	795	0.52	0.603
African-American	-0.30	2.12	795	-0.14	0.887
Grade 6	-1.38	2.23	795	-0.62	0.535
Baseline NJ score	4.79	0.88	795	5.46	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	27.54	0.046
Level-1 Residual	Student	577.16	

Table 38. Comprehension – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	599.77	1.51	12	398.46	0.000
Treatment (S)	4.16	2.38	12	1.75	0.105
Num eligible students (S)	-0.15	0.04	12	-4.29	0.001
Yr in need of improvement (S)	1.20	0.82	12	1.47	0.167
Num. ELL students (S)	0.32	0.05	12	6.75	0.000
Num. Special Education students (S)	0.23	0.07	12	3.32	0.007
Mean score of schools (S)	1.42	0.69	12	2.07	0.060
English Language Learners	3.79	3.52	353	1.08	0.283
Special Education student	-7.23	2.80	353	-2.58	0.011
Rec'd supplemental reading instruct	-1.15	3.66	353	-0.31	0.754
African-American	3.46	2.75	353	1.26	0.209
Grade 6	-0.45	3.55	353	-0.13	0.899
Baseline NJ score	6.74	1.27	353	5.31	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	3.99	0.007
Level-1 Residual	Student	555.89	

Table 39. Comprehension – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	596.80	1.75	12	340.65	0.000
Treatment (S)	1.68	3.20	12	0.53	0.609
Num eligible students (S)	-0.09	0.07	12	-1.28	0.226
Yr in need of improvement (S)	-0.20	1.41	12	-0.14	0.890
Num. ELL students (S)	0.00	0.13	12	-0.01	0.994
Num. Special Education students (S)	0.14	0.11	12	1.31	0.214
Mean score of schools (S)	0.43	0.70	12	0.62	0.544
English Language Learners	-1.60	3.19	430	-0.50	0.615
Special Education student	-8.51	1.51	430	-5.62	0.000
Rec'd supplemental reading instruct	4.06	3.58	430	1.13	0.258
African-American	-1.94	2.92	430	-0.67	0.506
Grade 6	-3.14	2.76	430	-1.14	0.256
Baseline NJ score	3.50	1.07	430	3.28	0.001

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	42.70	0.067
Level-1 Residual	Student	595.33	

Table 40. Comprehension – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	598.59	1.50	12	399.55	0.000
Treatment (S)	3.05	3.78	12	0.81	0.435
Num eligible students (S)	-0.14	0.07	12	-1.89	0.083
Yr in need of improvement (S)	1.21	1.52	12	0.80	0.441
Num. ELL students (S)	0.25	0.10	12	2.48	0.029
Num. Special Education students (S)	0.10	0.10	12	1.09	0.297
Mean score of schools (S)	1.06	0.87	12	1.22	0.247
Males	-2.25	1.65	432	-1.37	0.172
English Language Learners	-7.05	15.61	432	-0.45	0.652
Special Education student	-5.98	1.76	432	-3.40	0.001
Rec'd supplemental reading instruct	-0.53	2.43	432	-0.22	0.828
Grade 6	-1.26	2.53	432	-0.50	0.617
Baseline NJ score	5.40	1.36	432	3.98	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	64.10		0.104	
Level-1 Residual	Student	554.96			

Table 41. Comprehension – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	600.24	2.98	8	201.58	0.000
Treatment (S)	3.37	3.24	8	1.04	0.330
Num eligible students (S)	-0.13	0.06	8	-2.15	0.063
Yr in need of improvement (S)	-1.00	0.73	8	-1.37	0.208
Num. ELL students (S)	-0.04	0.10	8	-0.44	0.672
Num. Special Education students (S)	0.23	0.09	8	2.51	0.037
Mean score of schools (S)	-0.65	0.59	8	-1.09	0.308
Males	-5.74	3.28	333	-1.75	0.081
English Language Learners	1.47	1.95	333	0.76	0.451
Special Education student	-10.99	2.54	333	-4.32	0.000
Rec'd supplemental reading instruct	7.40	3.62	333	2.04	0.042
Grade 6	-1.09	3.22	333	-0.34	0.735
Baseline NJ score	3.81	0.96	333	3.99	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	0.60		0.001	
Level-1 Residual	Student	596.39			

Table 42. Comprehension – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	590.77	2.75	12	214.56	0.000
Treatment (S)	4.51	3.35	12	1.35	0.203
Num eligible students (S)	-0.16	0.07	12	-2.38	0.035
Yr in need of improvement (S)	1.40	1.03	12	1.37	0.197
Num. ELL students (S)	0.23	0.11	12	2.06	0.062
Num. Special Education students (S)	0.22	0.09	12	2.38	0.035
Mean score of schools (S)	0.83	0.68	12	1.22	0.246
Males	-2.45	3.04	333	-0.80	0.422
English Language Learners	4.75	3.56	333	1.33	0.183
Rec'd supplemental reading instruct	4.90	4.35	333	1.13	0.261
African-American	2.30	3.44	333	0.67	0.504
Grade 6	2.79	2.26	333	1.24	0.218
Baseline NJ score	2.22	1.04	333	2.15	0.032

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	43.16	0.080
Level-1 Residual	Student	497.25	

C8. Analysis Group 3 – Comprehension -- Year 2 7th Grade

Table 43. Comprehension – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	615.73	2.33	12	263.89	0.000
Treatment	2.40	2.88	12	0.83	0.422
Num eligible students (S)	-0.07	0.06	12	-1.18	0.263
Yr in need of improvement (S)	-0.23	0.93	12	-0.25	0.810
Num. ELL students (S)	0.20	0.16	12	1.26	0.231
Num. Special Education students (S)	0.11	0.16	12	0.65	0.526
Mean score of schools (S)	0.89	0.42	12	2.12	0.056
Males	-6.04	2.42	402	-2.49	0.013
Eligible free/reduced lunch	-3.55	3.01	402	-1.18	0.239
English Language Learners	-7.93	3.13	402	-2.53	0.012
Special Education student	-6.79	3.19	402	-2.13	0.034
Rec'd supplemental reading instruct	9.34	5.21	402	1.79	0.073
African-American	2.32	2.26	402	1.03	0.305
Baseline NJ score	7.91	1.57	402	5.04	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	34.32	0.067
Level-1 Residual	Student	476.61	

Table 44. Comprehension – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	621.32	1.34	12	462.52	0.000
Treatment	-2.72	1.66	12	-1.64	0.126
Num eligible students (S)	0.00	0.04	12	0.03	0.976
Yr in need of improvement (S)	0.27	0.72	12	0.38	0.713
Num. ELL students (S)	0.12	0.09	12	1.24	0.238
Num. Special Education students (S)	0.05	0.11	12	0.50	0.626
Mean score of schools (S)	1.65	0.73	12	2.26	0.043
Eligible free/reduced lunch	-2.33	3.25	185	-0.72	0.474
English Language Learners	-10.06	5.14	185	-1.96	0.052
Special Education student	-8.39	3.23	185	-2.59	0.011
Rec'd supplemental reading instruct	1.62	8.26	185	0.20	0.845
African-American	3.80	2.49	185	1.52	0.129
Baseline NJ score	7.16	1.38	185	5.19	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	0.21		0.000	
Level-1 Residual	Student	451.06			

Table 45. Comprehension – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	610.51	3.79	12	161.16	0.000
Treatment	6.58	4.39	12	1.50	0.159
Num eligible students (S)	-0.14	0.08	12	-1.77	0.102
Yr in need of improvement (S)	-1.45	1.66	12	-0.87	0.399
Num. ELL students (S)	0.25	0.21	12	1.19	0.258
Num. Special Education students (S)	0.14	0.24	12	0.61	0.553
Mean score of schools (S)	0.23	0.73	12	0.32	0.757
Eligible free/reduced lunch	-5.42	4.13	205	-1.31	0.191
English Language Learners	-5.90	3.91	205	-1.51	0.132
Special Education student	-6.38	3.21	205	-1.99	0.048
Rec'd supplemental reading instruct	19.33	4.15	205	4.66	0.000
African-American	-0.28	2.91	205	-0.10	0.925
Baseline NJ score	8.47	2.34	205	3.62	0.001
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	94.50		0.163	
Level-1 Residual	Student	485.25			

Table 46. Comprehension – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	616.76	3.87	12	159.46	0.000
Treatment	3.52	5.24	12	0.67	0.514
Num eligible students (S)	-0.02	0.15	12	-0.12	0.904
Yr in need of improvement (S)	-0.17	2.16	12	-0.08	0.937
Num. ELL students (S)	0.12	0.22	12	0.57	0.579
Num. Special Education students (S)	0.12	0.28	12	0.43	0.677
Mean score of schools (S)	1.04	1.12	12	0.93	0.372
Males	-7.38	3.01	210	-2.46	0.015
Eligible free/reduced lunch	-2.39	4.07	210	-0.59	0.556
English Language Learners	4.27	23.99	210	0.18	0.859
Special Education student	-4.25	3.53	210	-1.21	0.230
Rec'd supplemental reading instruct	14.46	8.43	210	1.72	0.087
Baseline NJ score	7.80	1.70	210	4.60	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	68.17		0.130	
Level-1 Residual	Student	457.24			

Table 47. Comprehension – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	614.26	3.96	7	155.16	0.000
Treatment	5.67	4.77	7	1.19	0.274
Num eligible students (S)	-0.15	0.06	7	-2.63	0.034
Yr in need of improvement (S)	-1.06	0.73	7	-1.45	0.190
Num. ELL students (S)	0.25	0.18	7	1.40	0.203
Num. Special Education students (S)	0.17	0.17	7	1.00	0.352
Mean score of schools (S)	0.28	0.49	7	0.58	0.578
Males	-5.31	2.35	174	-2.26	0.025
Eligible free/reduced lunch	-3.15	5.81	174	-0.54	0.588
English Language Learners	-8.64	2.98	174	-2.90	0.005
Special Education student	-9.12	3.57	174	-2.55	0.012
Rec'd supplemental reading instruct	4.79	8.36	174	0.57	0.567
Baseline NJ score	7.56	2.35	174	3.22	0.002
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	1.75		0.003	
Level-1 Residual	Student	508.34			

Table 48. Comprehension – Special Education

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	604.85	1.79	11	337.59	0.000
Treatment	9.95	2.68	11	3.72	0.004
Num eligible students (S)	-0.22	0.07	11	-3.08	0.011
Yr in need of improvement (S)	1.08	0.72	11	1.50	0.161
Num. ELL students (S)	0.53	0.07	11	7.43	0.000
Num. Special Education students (S)	0.24	0.10	11	2.26	0.045
Mean score of schools (S)	1.98	0.45	11	4.43	0.001
Males	-5.88	2.64	161	-2.23	0.027
Eligible free/reduced lunch	-1.72	3.67	161	-0.47	0.639
English Language Learners	-23.64	6.82	161	-3.46	0.001
Rec'd supplemental reading instruct	15.49	2.24	161	6.93	0.000
African-American	3.76	2.43	161	1.55	0.123
Baseline NJ score	5.55	1.93	161	2.88	0.005

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.32	0.001
Level-1 Residual	Student	437.17	

C9. Analysis Group 4 – Comprehension -- Year 2 8th Grade

Table 49. Comprehension – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	638.20	1.63	12	390.68	0.000
Treatment (S)	3.29	2.06	12	1.60	0.135
Num eligible students (S)	-0.04	0.06	12	-0.59	0.565
Yr in need of improvement (S)	0.11	1.14	12	0.10	0.923
Num. ELL students (S)	-0.20	0.07	12	-2.65	0.022
Num. Special Education students (S)	0.23	0.13	12	1.69	0.117
Mean score of schools (S)	0.87	0.70	12	1.24	0.241
Males	-2.34	1.96	337	-1.19	0.234
Eligible free/reduced lunch	-2.53	2.69	337	-0.94	0.347
English Language Learners	-6.01	4.77	337	-1.26	0.209
Special Education student	-5.90	2.64	337	-2.24	0.026
Rec'd supplemental reading instruct	-3.83	5.13	337	-0.75	0.456
African-American	0.47	2.50	337	0.19	0.852
Baseline NJ score	9.90	1.58	337	6.28	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	8.20	0.018
Level-1 Residual	Student	438.67	

Table50. Comprehension – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	642.74	1.74	12	369.13	0.000
Treatment (S)	3.05	2.55	12	1.20	0.254
Num eligible students (S)	-0.11	0.10	12	-1.14	0.276
Yr in need of improvement (S)	0.92	1.93	12	0.48	0.642
Num. ELL students (S)	-0.14	0.11	12	-1.25	0.236
Num. Special Education students (S)	0.30	0.20	12	1.54	0.149
Mean score of schools (S)	1.62	1.19	12	1.36	0.199
Eligible free/reduced lunch	-4.61	5.96	157	-0.77	0.440
English Language Learners	-13.50	5.73	157	-2.35	0.020
Special Education student	-4.66	4.49	157	-1.04	0.301
Rec'd supplemental reading instruct	-2.73	5.10	157	-0.54	0.593
African-American	-4.24	3.42	157	-1.24	0.217
Baseline NJ score	10.24	2.14	157	4.78	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	22.99		0.055	
Level-1 Residual	Student	391.92			

Table 51. Comprehension – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	633.94	1.71	12	371.49	0.000
Treatment (S)	3.74	2.57	12	1.46	0.171
Num eligible students (S)	0.01	0.09	12	0.11	0.918
Yr in need of improvement (S)	-0.19	0.91	12	-0.21	0.837
Num. ELL students (S)	-0.22	0.10	12	-2.25	0.044
Num. Special Education students (S)	0.18	0.17	12	1.03	0.325
Mean score of schools (S)	0.33	0.53	12	0.63	0.541
Eligible free/reduced lunch	-1.98	3.56	168	-0.56	0.579
English Language Learners	6.21	8.66	168	0.72	0.474
Special Education student	-5.57	3.05	168	-1.83	0.069
Rec'd supplemental reading instruct	-6.32	6.78	168	-0.93	0.353
African-American	4.40	2.64	168	1.67	0.097
Baseline NJ score	9.85	2.01	168	4.91	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	0.45		0.001	
Level-1 Residual	Student	489.19			

Table 52. Comprehension – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	639.61	2.38	12	268.73	0.000
Treatment (S)	0.35	3.20	12	0.11	0.915
Num eligible students (S)	-0.15	0.09	12	-1.56	0.144
Yr in need of improvement (S)	1.15	1.47	12	0.78	0.451
Num. ELL students (S)	-0.05	0.14	12	-0.37	0.720
Num. Special Education students (S)	0.34	0.18	12	1.92	0.078
Mean score of schools (S)	1.49	0.68	12	2.19	0.049
Males	0.42	3.09	185	0.14	0.892
Eligible free/reduced lunch	-0.44	4.18	185	-0.11	0.916
English Language Learners	-0.97	21.92	185	-0.04	0.965
Special Education student	-7.16	3.53	185	-2.03	0.044
Rec'd supplemental reading instruct	-7.36	10.66	185	-0.69	0.490
Baseline NJ score	9.92	1.56	185	6.36	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.98	0.002
Level-1 Residual	Student	435.14	

Table 53. Comprehension – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	638.43	2.59	7	246.49	0.000
Treatment (S)	4.84	3.39	7	1.43	0.196
Num eligible students (S)	0.19	0.08	7	2.51	0.040
Yr in need of improvement (S)	-2.66	1.45	7	-1.84	0.108
Num. ELL students (S)	-0.52	0.14	7	-3.71	0.009
Num. Special Education students (S)	-0.10	0.22	7	-0.45	0.669
Mean score of schools (S)	-0.87	1.07	7	-0.81	0.445
Males	-5.16	2.12	134	-2.43	0.016
Eligible free/reduced lunch	-4.91	5.80	134	-0.85	0.399
English Language Learners	-7.91	5.65	134	-1.40	0.164
Special Education student	-4.41	3.85	134	-1.14	0.255
Rec'd supplemental reading instruct	-3.85	8.80	134	-0.44	0.662
Baseline NJ score	10.13	1.29	134	7.86	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	2.98	0.006
Level-1 Residual	Student	469.23	

Table 54. Comprehension – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	628.57	4.17	10	150.66	0.000
Treatment (S)	5.79	5.58	10	1.04	0.325
Num eligible students (S)	0.07	0.21	10	0.34	0.738
Yr in need of improvement (S)	-2.40	2.57	10	-0.93	0.373
Num. ELL students (S)	-0.35	0.27	10	-1.31	0.219
Num. Special Education students (S)	-0.03	0.39	10	-0.07	0.948
Mean score of schools (S)	-0.16	1.21	10	-0.13	0.899
Males	-1.33	4.28	113	-0.31	0.757
Eligible free/reduced lunch	-15.88	6.56	113	-2.42	0.017
English Language Learners	-2.99	23.53	113	-0.13	0.899
Rec'd supplemental reading instruct	-17.38	16.38	113	-1.06	0.291
African-American	-2.14	4.70	113	-0.46	0.650
Baseline NJ score	12.44	1.95	113	6.39	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	27.68	0.055
Level-1 Residual	Student	477.60	

C10. Analysis Group 5 – Comprehension -- Year 2 7th & 8th Grade

Table 55. Comprehension – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	625.81	1.73	12	362.27	0.000
Treatment (S)	2.77	2.02	12	1.37	0.196
Num eligible students (S)	-0.05	0.03	12	-1.55	0.148
Yr in need of improvement (S)	0.13	0.86	12	0.15	0.886
Num. ELL students (S)	0.04	0.10	12	0.37	0.720
Num. Special Education students (S)	0.13	0.11	12	1.23	0.242
Mean score of schools (S)	0.86	0.36	12	2.37	0.035
Males	-4.83	1.57	752	-3.08	0.003
Eligible free/reduced lunch	-3.81	1.75	752	-2.18	0.029
English Language Learners	-7.64	2.69	752	-2.84	0.005
Special Education student	-6.58	2.27	752	-2.90	0.004
Rec'd supplemental reading instruct	4.58	3.90	752	1.17	0.241
African-American	1.06	1.07	752	0.99	0.321
Grade 8	21.15	2.06	752	10.28	0.000
Baseline NJ score	8.61	0.91	752	9.50	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	16.84	0.035
Level-1 Residual	Student	463.57	

Table 56. Comprehension – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	631.48	0.92	12	683.80	0.000
Treatment (S)	-0.22	1.47	12	-0.15	0.886
Num eligible students (S)	-0.05	0.04	12	-1.29	0.223
Yr in need of improvement (S)	0.75	0.64	12	1.16	0.268
Num. ELL students (S)	0.00	0.07	12	-0.05	0.965
Num. Special Education students (S)	0.16	0.07	12	2.18	0.049
Mean score of schools (S)	1.45	0.33	12	4.44	0.001
Eligible free/reduced lunch	-4.28	2.91	354	-1.47	0.142
English Language Learners	-12.07	3.31	354	-3.65	0.001
Special Education student	-6.82	2.74	354	-2.49	0.013
Rec'd supplemental reading instruct	-0.70	6.04	354	-0.12	0.908
African-American	-0.91	1.43	354	-0.64	0.525
Grade 8	20.40	2.51	354	8.11	0.000
Baseline NJ score	8.90	1.12	354	7.94	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.27	0.001
Level-1 Residual	Student	426.82	

Table 57. Comprehension – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	620.49	2.52	12	246.55	0.000
Treatment (S)	5.79	2.84	12	2.04	0.063
Num eligible students (S)	-0.03	0.06	12	-0.57	0.579
Yr in need of improvement (S)	-0.65	1.31	12	-0.50	0.629
Num. ELL students (S)	0.04	0.14	12	0.27	0.792
Num. Special Education students (S)	0.07	0.17	12	0.44	0.667
Mean score of schools (S)	0.30	0.54	12	0.56	0.587
Eligible free/reduced lunch	-4.51	3.26	385	-1.38	0.168
English Language Learners	-2.32	2.77	385	-0.84	0.403
Special Education student	-6.31	2.40	385	-2.63	0.009
Rec'd supplemental reading instruct	7.73	4.76	385	1.62	0.105
African-American	1.84	1.62	385	1.14	0.256
Grade 8	22.40	2.59	385	8.65	0.000
Baseline NJ score	8.37	1.53	385	5.49	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	34.77	0.065

Level-1 Residual	Student	498.20

Table 58. Comprehension – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	626.68	2.23	12	281.59	0.000
Treatment (S)	2.70	2.42	12	1.12	0.285
Num eligible students (S)	-0.04	0.04	12	-1.01	0.332
Yr in need of improvement (S)	0.44	1.02	12	0.43	0.674
Num. ELL students (S)	0.03	0.11	12	0.26	0.802
Num. Special Education students (S)	0.13	0.10	12	1.22	0.247
Mean score of schools (S)	1.00	0.37	12	2.73	0.019
Males	-4.21	1.95	407	-2.16	0.031
Eligible free/reduced lunch	-2.74	2.06	407	-1.33	0.185
English Language Learners	4.60	8.88	407	0.52	0.604
Special Education student	-5.64	2.82	407	-2.00	0.046
Rec'd supplemental reading instruct	7.24	7.19	407	1.01	0.315
Grade 8	22.94	2.49	407	9.21	0.000
Baseline NJ score	8.82	1.23	407	7.16	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	19.36		0.041	
Level-1 Residual	Student	457.86			

Table 59. Comprehension – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	624.21	2.72	8	229.68	0.000
Treatment (S)	4.57	3.21	8	1.42	0.192
Num eligible students (S)	-0.04	0.06	8	-0.60	0.562
Yr in need of improvement (S)	-0.95	0.79	8	-1.20	0.264
Num. ELL students (S)	-0.01	0.15	8	-0.05	0.964
Num. Special Education students (S)	0.10	0.18	8	0.58	0.577
Mean score of schools (S)	-0.04	0.48	8	-0.09	0.933
Males	-6.13	1.88	320	-3.27	0.002
Eligible free/reduced lunch	-4.20	4.60	320	-0.91	0.362
English Language Learners	-8.67	2.59	320	-3.35	0.001
Special Education student	-7.28	3.08	320	-2.36	0.019
Rec'd supplemental reading instruct	2.65	7.60	320	0.35	0.727
Grade 8	19.07	2.76	320	6.92	0.000
Baseline NJ score	8.58	1.34	320	6.38	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	7.94		0.016	

Level-1 Residual	Student	487.26

Table 60. Comprehension – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	615.42	1.81	11	340.63	0.000
Treatment (S)	6.54	2.43	11	2.70	0.021
Num eligible students (S)	-0.14	0.06	11	-2.13	0.056
Yr in Need of Improvement (S)	0.64	1.34	11	0.48	0.643
Num. ELL students (S)	0.23	0.07	11	3.17	0.009
Num. Special Education students (S)	0.16	0.14	11	1.09	0.301
Mean score of schools (S)	0.86	0.89	11	0.97	0.354
Males	-5.06	2.17	286	-2.34	0.020
Eligible free/reduced lunch	-8.76	3.19	286	-2.75	0.007
English Language Learners	-12.85	4.92	286	-2.61	0.010
Rec'd supplemental reading instruct	4.81	8.09	286	0.60	0.552
African-American	0.82	1.90	286	0.43	0.665
Grade 8	21.82	2.88	286	7.57	0.000
Baseline NJ score	8.49	1.35	286	6.28	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	32.11	0.063
Level-1 Residual	Student	476.88	

C11. Analysis Group 1 – Language Arts -- Year 1 6-8th Grades and Year 2 6th Grade combined

Table 61. Language Arts – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	601.22	1.03	12	581.08	0.000
Treatment (S)	1.44	1.56	12	0.92	0.376
Num eligible students (S)	-0.11	0.03	12	-4.30	0.001
Yr in need of improvement (S)	-0.37	0.69	12	-0.54	0.600
Num. ELL students (S)	0.04	0.06	12	0.65	0.527
Num. Special Education students (S)	0.19	0.06	12	3.03	0.011
Mean score of schools (S)	0.02	0.34	12	0.06	0.952
Males	-6.30	1.30	1443	-4.85	0.000
English Language Learners	-4.30	1.12	1443	-3.84	0.000
Special Education student	-12.19	1.11	1443	-10.94	0.000
Rec'd supplemental reading instruct	-1.64	1.68	1443	-0.98	0.328
African-American	-2.21	1.47	1443	-1.50	0.133
Grade 6	2.17	1.51	1443	1.44	0.151
Grade 7	16.51	2.43	1443	6.78	0.000
Grade 8	28.96	1.63	1443	17.76	0.000
Baseline NJ score	4.90	0.58	1443	8.46	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	11.33	0.026
Level-1 Residual	Student	427.86	

Table 62. Language Arts – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	604.47	0.67	12	907.47	0.000
Treatment (S)	3.66	1.32	12	2.77	0.017
Num eligible students (S)	-0.15	0.03	12	-5.55	0.000
Yr in need of improvement (S)	0.18	0.43	12	0.43	0.676
Num. ELL students (S)	0.08	0.05	12	1.50	0.159
Num. Special Education students (S)	0.27	0.05	12	5.61	0.000
Mean score of schools (S)	0.39	0.32	12	1.22	0.246
English Language Learners	-1.46	2.47	635	-0.59	0.554
Special Education student	-13.80	1.48	635	-9.31	0.000
Rec'd supplemental reading instruct	-3.10	1.37	635	-2.26	0.024
African-American	-1.75	1.99	635	-0.88	0.379
Grade 6	1.21	2.30	635	0.53	0.600
Grade 7	14.32	3.39	635	4.23	0.000
Grade 8	26.96	3.02	635	8.93	0.000
Baseline NJ score	6.32	0.89	635	7.07	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	0.27	0.001
Level-1 Residual	Student	457.17	

Table 63. Language Arts – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	599.17	1.96	12	305.89	0.000
Treatment (S)	-0.46	2.37	12	-0.19	0.851
Num eligible students (S)	-0.10	0.04	12	-2.20	0.048
Yr in need of improvement (S)	-0.70	1.08	12	-0.65	0.530
Num. ELL students (S)	0.00	0.10	12	0.04	0.966
Num. Special Education students (S)	0.14	0.13	12	1.10	0.292
Mean score of schools (S)	-0.26	0.45	12	-0.58	0.571
English Language Learners	-7.26	1.98	794	-3.67	0.000
Special Education student	-11.11	1.43	794	-7.75	0.000
Rec'd supplemental reading instruct	-0.01	2.30	794	0.00	0.997
African-American	-2.69	1.61	794	-1.67	0.095
Grade 6	2.57	1.72	794	1.49	0.136
Grade 7	18.26	2.41	794	7.56	0.000
Grade 8	31.01	1.60	794	19.44	0.000
Baseline NJ score	3.85	0.90	794	4.30	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	32.54	0.076
Level-1 Residual	Student	395.46	

Table 64. Language Arts – African-American

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	600.40	0.99	12	607.84	0.000
Treatment (S)	2.40	1.64	12	1.47	0.167
Num eligible students (S)	-0.10	0.04	12	-2.77	0.017
Yr in need of improvement (S)	-0.18	0.76	12	-0.24	0.812
Num. ELL students (S)	0.03	0.06	12	0.58	0.572
Num. Special Education students (S)	0.15	0.07	12	2.22	0.046
Mean score of schools (S)	0.10	0.35	12	0.28	0.783
Males	-5.85	1.40	812	-4.18	0.000
English Language Learners	-12.51	10.37	812	-1.21	0.228
Special Education student	-10.68	1.52	812	-7.03	0.000
Rec'd supplemental reading instruct	-2.16	2.13	812	-1.02	0.311
Grade 6	0.39	2.02	812	0.19	0.848
Grade 7	14.51	2.11	812	6.86	0.000
Grade 8	25.71	1.95	812	13.15	0.000
Baseline NJ score	5.81	0.69	812	8.44	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	11.44	0.027
Level-1 Residual	Student	415.69	

Table 65. Language Arts – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	603.22	2.88	9	209.72	0.000
Treatment (S)	0.31	3.58	9	0.09	0.934
Num eligible students (S)	-0.13	0.07	9	-1.89	0.091
Yr in need of improvement (S)	-0.90	0.84	9	-1.07	0.311
Num. ELL students (S)	0.05	0.09	9	0.50	0.626
Num. Special Education students (S)	0.17	0.17	9	0.97	0.356
Mean score of schools (S)	-0.57	0.53	9	-1.07	0.312
Males	-6.81	2.24	590	-3.05	0.003
English Language Learners	-4.07	1.06	590	-3.85	0.000
Special Education student	-13.89	1.91	590	-7.27	0.000
Rec'd supplemental reading instruct	0.85	2.44	590	0.35	0.726
Grade 6	4.86	1.62	590	3.00	0.003
Grade 7	19.53	3.93	590	4.97	0.000
Grade 8	33.33	1.77	590	18.81	0.000
Baseline NJ score	4.21	0.92	590	4.57	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	26.31	0.056
Level-1 Residual	Student	444.92	

Table 66. Language Arts – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	590.88	1.52	12	388.09	0.000
Treatment (S)	2.40	1.90	12	1.26	0.231
Num eligible students (S)	0.00	0.06	12	-0.08	0.942
Yr in need of improvement (S)	0.27	0.73	12	0.37	0.716
Num. ELL students (S)	-0.01	0.09	12	-0.12	0.903
Num. Special Education students (S)	0.00	0.10	12	0.02	0.986
Mean score of schools (S)	-0.43	0.42	12	-1.02	0.328
Males	-4.37	1.96	583	-2.23	0.026
English Language Learners	1.77	2.76	583	0.64	0.522
Rec'd supplemental reading instruct	-0.89	2.98	583	-0.30	0.766
African-American	-0.72	1.97	583	-0.37	0.713
Grade 6	6.26	1.74	583	3.61	0.001
Grade 7	18.91	3.54	583	5.34	0.000
Grade 8	32.34	1.60	583	20.20	0.000
Baseline NJ score	4.47	0.56	583	8.03	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	9.59	0.026
Level-1 Residual	Student	362.33	

C12. Analysis Group 2 – Language Arts -- Year 1 6th Grade and Year 2 6th Grade combined

Table 67. Language Arts – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	590.12	1.24	12	474.87	0.000
Treatment (S)	2.67	1.97	12	1.36	0.199
Num eligible students (S)	-0.13	0.04	12	-3.43	0.005
Yr in need of improvement (S)	0.60	0.79	12	0.76	0.465
Num. ELL students (S)	0.11	0.08	12	1.41	0.184
Num. Special Education students (S)	0.16	0.06	12	2.68	0.021
Mean score of schools (S)	0.20	0.41	12	0.49	0.630
Males	-8.44	1.93	737	-4.36	0.000
English Language Learners	-3.13	1.86	737	-1.68	0.093
Special Education student	-11.66	1.81	737	-6.45	0.000
Rec'd supplemental reading instruct	-2.66	1.90	737	-1.40	0.161
African-American	0.34	2.20	737	0.15	0.879
Grade 6	2.51	1.54	737	1.63	0.104
Baseline NJ score	5.36	0.75	737	7.14	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	14.62	0.033
Level-1 Residual	Student	429.54	

Table 68. Language Arts – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	594.50	1.19	12	499.02	0.000
Treatment (S)	3.97	2.48	12	1.60	0.135
Num eligible students (S)	-0.07	0.06	12	-1.32	0.211
Yr in need of improvement (S)	1.47	0.71	12	2.06	0.062
Num. ELL students (S)	0.14	0.08	12	1.93	0.078
Num. Special Education students (S)	0.15	0.07	12	2.06	0.061
Mean score of schools (S)	0.92	0.57	12	1.61	0.133
English Language Learners	1.14	2.83	327	0.40	0.688
Special Education student	-13.71	2.13	327	-6.44	0.000
Rec'd supplemental reading instruct	-3.92	2.74	327	-1.43	0.154
African-American	5.35	3.39	327	1.58	0.115
Grade 6	1.45	2.45	327	0.59	0.552
Baseline NJ score	8.76	1.36	327	6.44	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	13.71	0.031
Level-1 Residual	Student	424.61	

Table 69. Language Arts – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	586.69	2.39	12	245.28	0.000
Treatment (S)	1.39	2.90	12	0.48	0.640
Num eligible students (S)	-0.15	0.05	12	-3.01	0.011
Yr in need of improvement (S)	-0.04	1.28	12	-0.03	0.974
Num. ELL students (S)	0.03	0.13	12	0.25	0.811
Num. Special Education students (S)	0.16	0.13	12	1.27	0.230
Mean score of schools (S)	-0.18	0.51	12	-0.36	0.728
English Language Learners	-6.36	3.55	398	-1.79	0.074
Special Education student	-9.40	2.64	398	-3.56	0.001
Rec'd supplemental reading instruct	-0.69	2.90	398	-0.24	0.811
African-American	-3.13	2.18	398	-1.43	0.152
Grade 6	2.65	1.63	398	1.62	0.105
Baseline NJ score	3.50	0.85	398	4.11	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	37.87	0.085
Level-1 Residual	Student	406.01	

Table 70. Language Arts –African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	589.51	1.64	12	359.96	0.000
Treatment (S)	4.22	2.64	12	1.60	0.136
Num eligible students (S)	-0.08	0.05	12	-1.71	0.113
Yr in need of improvement (S)	0.42	0.96	12	0.44	0.668
Num. ELL students (S)	0.03	0.08	12	0.41	0.686
Num. Special Education students (S)	0.08	0.07	12	1.17	0.266
Mean score of schools (S)	0.34	0.43	12	0.80	0.440
Males	-9.04	1.66	399	-5.45	0.000
English Language Learners	-9.00	12.92	399	-0.70	0.486
Special Education student	-11.53	2.87	399	-4.02	0.000
Rec'd supplemental reading instruct	-3.89	3.06	399	-1.27	0.204
Grade 6	0.75	2.03	399	0.37	0.711
Baseline NJ score	6.99	1.22	399	5.74	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	18.84		0.044	
Level-1 Residual	Student	412.75			

Table 71. Language Arts – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	594.98	5.22	8	113.97	0.000
Treatment (S)	-3.08	5.59	8	-0.55	0.597
Num eligible students (S)	-0.16	0.10	8	-1.64	0.139
Yr in need of improvement (S)	1.54	1.38	8	1.12	0.297
Num. ELL students (S)	0.06	0.15	8	0.44	0.670
Num. Special Education students (S)	0.20	0.25	8	0.82	0.438
Mean score of schools (S)	-0.31	1.07	8	-0.29	0.781
Males	-8.08	3.23	308	-2.50	0.013
English Language Learners	-2.23	1.54	308	-1.45	0.149
Rec'd supplemental reading instruct	-11.47	3.07	308	-3.73	0.000
Special Education student	1.92	2.30	308	0.83	0.406
Grade 6	5.42	1.89	308	2.86	0.005
Baseline NJ score	3.92	0.67	308	5.82	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	88.08		0.165	
Level-1 Residual	Student	447.30			

Table 72. Language Arts – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	581.73	3.74	12	155.60	0.000
Treatment (S)	4.41	4.30	12	1.03	0.326
Num eligible students (S)	-0.08	0.11	12	-0.69	0.506
Yr in need of improvement (S)	1.24	1.30	12	0.95	0.362
Num. ELL students (S)	0.13	0.17	12	0.75	0.467
Num. Special Education students (S)	-0.01	0.15	12	-0.05	0.964
Mean score of schools (S)	-1.11	0.87	12	-1.28	0.226
Males	-4.16	2.54	311	-1.64	0.102
English Language Learners	2.28	2.24	311	1.02	0.310
Rec'd supplemental reading instruct	-0.21	5.11	311	-0.04	0.968
African-American	-0.95	4.01	311	-0.24	0.812
Grade 6	6.46	1.69	311	3.82	0.000
Baseline NJ score	4.77	0.76	311	6.28	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	80.10	0.183
Level-1 Residual	Student	356.51	

C13. Analysis Group 3 – Language Arts -- Year 2 7th Grade

Table 73. Language Arts – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	608.76	2.24	12	272.34	0.000
Treatment (S)	-1.66	2.81	12	-0.59	0.564
Num eligible students (S)	-0.13	0.07	12	-1.95	0.075
Yr in need of improvement (S)	1.29	1.04	12	1.24	0.241
Num. ELL students (S)	0.40	0.12	12	3.34	0.006
Num. Special Education students (S)	0.11	0.17	12	0.64	0.534
Mean score of schools (S)	0.58	0.73	12	0.80	0.442
Males	-9.10	1.83	392	-4.97	0.000
Eligible free/reduced lunch	-2.47	2.56	392	-0.96	0.337
English Language Learners	-2.61	2.47	392	-1.06	0.292
Special Education student	-9.31	2.92	392	-3.19	0.002
Rec'd supplemental reading instruct	9.13	4.75	392	1.92	0.055
African-American	-1.98	2.77	392	-0.72	0.475
Baseline NJ score	8.96	1.24	392	7.26	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	37.44	0.076
Level-1 Residual	Student	453.75	

Table 74. Language Arts –Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	616.51	2.71	12	227.23	0.000
Treatment (S)	-6.64	3.42	12	-1.94	0.076
Num eligible students (S)	-0.12	0.09	12	-1.38	0.193
Yr in need of improvement (S)	2.08	1.24	12	1.68	0.119
Num. ELL students (S)	0.43	0.15	12	2.92	0.013
Num. Special Education students (S)	0.15	0.19	12	0.78	0.451
Mean score of schools (S)	1.63	1.01	12	1.61	0.133
Eligible free/reduced lunch	1.59	3.08	180	0.52	0.606
English Language Learners	0.60	3.53	180	0.17	0.866
Special Education student	-10.21	3.45	180	-2.96	0.004
Rec'd supplemental reading instruct	13.78	5.52	180	2.50	0.014
African-American	1.47	4.01	180	0.37	0.714
Baseline NJ score	9.49	1.52	180	6.25	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	36.23	0.072
Level-1 Residual	Student	465.97	

Table 75. Language Arts – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	602.15	2.79	12	215.94	0.000
Treatment (S)	1.30	3.37	12	0.38	0.707
Num eligible students (S)	-0.12	0.06	12	-1.87	0.086
Yr in need of improvement (S)	0.40	0.95	12	0.42	0.681
Num. ELL students (S)	0.38	0.13	12	2.87	0.015
Num. Special Education students (S)	0.04	0.18	12	0.20	0.842
Mean score of schools (S)	-0.17	0.66	12	-0.26	0.802
Eligible free/reduced lunch	-5.87	5.37	200	-1.09	0.276
English Language Learners	-7.44	4.32	200	-1.72	0.086
Special Education student	-9.09	3.94	200	-2.31	0.022
Rec'd supplemental reading instruct	10.26	6.92	200	1.48	0.139
African-American	-5.72	3.03	200	-1.89	0.060
Baseline NJ score	8.55	1.71	200	5.01	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	41.57	0.085
Level-1 Residual	Student	448.61	

Table 76. Language Arts – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	608.59	3.31	12	183.73	0.000
Treatment (S)	-2.91	4.50	12	-0.65	0.530
Num eligible students (S)	-0.10	0.13	12	-0.79	0.443
Yr in need of improvement (S)	0.83	1.84	12	0.45	0.661
Num. ELL students (S)	0.38	0.18	12	2.07	0.060
Num. Special Education students (S)	0.04	0.23	12	0.16	0.878
Mean score of schools (S)	0.27	0.94	12	0.29	0.775
Males	-10.97	2.94	203	-3.74	0.000
Eligible free/reduced lunch	-2.36	3.86	203	-0.61	0.542
English Language Learners	6.15	22.79	203	0.27	0.788
Special Education student	-7.00	3.46	203	-2.02	0.044
Rec'd supplemental reading instruct	8.44	8.03	203	1.05	0.295
Baseline NJ score	7.16	1.63	203	4.39	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	40.55	0.089
Level-1 Residual	Student	416.52	

Table 77. Language Arts – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	605.31	5.46	7	110.87	0.000
Treatment (S)	8.22	7.11	7	1.16	0.286
Num eligible students (S)	-0.20	0.16	7	-1.27	0.245
Yr in need of improvement (S)	1.66	1.43	7	1.16	0.286
Num. ELL students (S)	0.58	0.27	7	2.17	0.066
Num. Special Education students (S)	0.17	0.36	7	0.47	0.655
Mean score of schools (S)	1.73	0.83	7	2.09	0.074
Males	-7.59	3.06	171	-2.48	0.014
Eligible free/reduced lunch	0.02	6.99	171	0.00	0.997
English Language Learners	-5.57	2.72	171	-2.05	0.042
Rec'd supplemental reading instruct	-12.06	3.26	171	-3.69	0.001
African-American	10.93	7.73	171	1.41	0.159
Baseline NJ score	10.59	1.86	171	5.68	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	95.95	0.165
Level-1 Residual	Student	487.20	

Table 78. Language Arts – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	598.62	3.05	11	196.33	0.000
Treatment (S)	-0.37	4.69	11	-0.08	0.938
Num. eligible students (S)	-0.04	0.12	11	-0.32	0.752
Yr in need of improvement (S)	1.65	1.40	11	1.18	0.263
Num. ELL students (S)	0.52	0.12	11	4.44	0.001
Num. Special Education students (S)	-0.16	0.18	11	-0.89	0.394
Mean score of schools (S)	0.72	0.98	11	0.73	0.479
Males	-6.82	2.72	157	-2.51	0.013
Eligible free/reduced lunch	-1.85	3.38	157	-0.55	0.584
English Language Learners	-6.70	13.18	157	-0.51	0.611
Rec'd supplemental reading instruct	20.89	1.71	157	12.19	0.000
African-American	4.96	3.72	157	1.34	0.184
Baseline NJ score	5.52	1.86	157	2.98	0.004

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	75.07	0.134
Level-1 Residual	Student	486.26	

C14. Analysis Group 4 – Language Arts -- Year 2 8th Grade

Table 79. Language Arts – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	620.96	1.76	12	353.39	0.000
Treatment (S)	2.46	2.83	12	0.87	0.402
Num eligible students (S)	-0.05	0.11	12	-0.45	0.662
Yr in need of improvement (S)	-0.61	1.77	12	-0.34	0.738
Num. ELL students (S)	-0.03	0.14	12	-0.25	0.810
Num. Special Education students (S)	0.21	0.22	12	0.94	0.369
Mean score of schools (S)	0.37	0.85	12	0.44	0.671
Males	-2.58	1.50	332	-1.73	0.084
Eligible free/reduced lunch	4.34	3.10	332	1.40	0.162
English Language Learners	-6.02	3.03	332	-1.99	0.047
Special Education student	-9.21	3.24	332	-2.84	0.005
Rec'd supplemental reading instruct	1.75	10.31	332	0.17	0.866
African-American	1.48	2.45	332	0.60	0.547
Baseline NJ score	8.18	1.33	332	6.14	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	57.95	0.135
Level-1 Residual	Student	370.29	

Table 80. Language Arts – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	626.44	1.59	12	394.40	0.000
Treatment (S)	1.26	2.56	12	0.49	0.631
Num eligible students (S)	-0.01	0.09	12	-0.15	0.881
Yr in need of improvement (S)	0.04	1.39	12	0.03	0.980
Num. ELL students (S)	-0.12	0.10	12	-1.17	0.267
Num. Special Education students (S)	0.13	0.22	12	0.59	0.569
Mean score of schools (S)	0.07	0.80	12	0.09	0.933
Eligible free/reduced lunch	2.81	2.40	155	1.17	0.245
English Language Learners	-9.35	3.29	155	-2.84	0.006
Special Education student	-10.03	3.93	155	-2.56	0.012
Rec'd supplemental reading instruct	-16.39	12.31	155	-1.33	0.185
African-American	-6.35	3.58	155	-1.77	0.078
Baseline NJ score	9.49	1.85	155	5.12	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	14.82	0.033
Level-1 Residual	Student	429.33	

Table 81. Language Arts – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	615.72	1.95	12	316.51	0.000
Treatment (S)	5.02	3.30	12	1.52	0.154
Num eligible students (S)	-0.07	0.11	12	-0.61	0.552
Yr in need of improvement (S)	-0.44	1.77	12	-0.25	0.810
Num. ELL students (S)	0.04	0.15	12	0.26	0.802
Num. Special Education students (S)	0.25	0.20	12	1.24	0.241
Mean score of schools (S)	0.71	0.76	12	0.93	0.370
Eligible free/reduced lunch	6.06	4.40	165	1.38	0.170
English Language Learners	-7.85	3.53	165	-2.23	0.027
Special Education student	-7.68	3.15	165	-2.44	0.016
Rec'd supplemental reading instruct	17.62	8.90	165	1.98	0.049
African-American	6.84	3.32	165	2.06	0.040
Baseline NJ score	7.28	1.50	165	4.86	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	44.90	0.119
Level-1 Residual	Student	330.86	

Table 82. Language Arts – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	621.40	3.75	12	165.63	0.000
Treatment (S)	0.92	5.06	12	0.18	0.860
Num eligible students (S)	-0.11	0.15	12	-0.70	0.496
Yr in need of improvement (S)	0.15	2.13	12	0.07	0.944
Num. ELL students (S)	0.10	0.21	12	0.49	0.634
Num. Special Education students (S)	0.23	0.28	12	0.83	0.426
Mean score of schools (S)	0.53	1.09	12	0.49	0.634
Males	0.38	2.97	183	0.13	0.897
Eligible free/reduced lunch	2.59	4.03	183	0.64	0.521
English Language Learners	-1.08	20.73	183	-0.05	0.959
Special Education student	-9.28	3.42	183	-2.71	0.008
Rec'd supplemental reading instruct	-9.23	10.16	183	-0.91	0.366
Baseline NJ score	6.19	1.49	183	4.15	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	61.27		0.138	
Level-1 Residual	Student	382.76			

Table 83. Language Arts – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	619.74	2.12	7	292.65	0.000
Treatment (S)	10.79	2.62	7	4.12	0.005
Num eligible students (S)	-0.03	0.07	7	-0.42	0.690
Yr in need of improvement (S)	-2.71	0.67	7	-4.04	0.006
Num. ELL students (S)	-0.22	0.08	7	-2.59	0.036
Num. Special Education students (S)	0.17	0.14	7	1.19	0.272
Mean score of schools (S)	-1.15	0.61	7	-1.88	0.102
Males	-7.42	3.20	131	-2.32	0.022
Eligible free/reduced lunch	13.83	8.27	131	1.67	0.096
English Language Learners	-8.10	3.45	131	-2.35	0.021
Special Education student	-8.62	3.80	131	-2.27	0.025
Rec'd supplemental reading instruct	16.79	7.59	131	2.21	0.028
Baseline NJ score	12.13	1.59	131	7.64	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	0.23		0.001	
Level-1 Residual	Student	341.03			

Table 84. Language Arts – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	612.88	5.15	10	118.99	0.000
Treatment (S)	3.31	7.07	10	0.47	0.649
Num eligible students (S)	0.08	0.25	10	0.33	0.745
Yr in need of improvement (S)	-2.20	3.13	10	-0.71	0.497
Num. ELL students (S)	-0.08	0.32	10	-0.25	0.808
Num. Special Education students (S)	-0.21	0.46	10	-0.45	0.664
Mean score of schools (S)	-0.29	1.51	10	-0.19	0.852
Males	2.89	4.02	111	0.72	0.474
Eligible free/reduced lunch	-0.69	6.15	111	-0.11	0.912
English Language Learners	11.46	22.22	111	0.52	0.607
Rec'd supplemental reading instruct	-14.21	15.12	111	-0.94	0.350
African-American	2.97	4.55	111	0.65	0.515
Baseline NJ score	9.84	1.82	111	5.41	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	105.65	0.209
Level-1 Residual	Student	399.29	

C15. Analysis Group 5 – Language Arts -- Year 2 7th & 8th Grade

Table 85. Language Arts – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	614.11	1.89	12	324.15	0.000
Treatment (S)	0.05	2.34	12	0.02	0.984
Num eligible students (S)	-0.11	0.06	12	-1.82	0.094
Yr in need of improvement (S)	0.91	0.99	12	0.91	0.380
Num. ELL students (S)	0.26	0.10	12	2.61	0.023
Num. Special Education students (S)	0.17	0.16	12	1.11	0.288
Mean score of schools (S)	0.67	0.51	12	1.32	0.213
Males	-6.92	1.01	737	-6.86	0.000
Eligible free/reduced lunch	0.47	2.51	737	0.19	0.853
English Language Learners	-3.72	2.40	737	-1.55	0.122
Special Education student	-9.70	2.61	737	-3.72	0.000
Rec'd supplemental reading instruct	5.73	4.15	737	1.38	0.168
African-American	-0.13	2.12	737	-0.06	0.951
Grade 8	13.39	2.47	737	5.41	0.000
Baseline NJ score	8.21	1.05	737	7.85	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	34.40	0.074
Level-1 Residual	Student	431.15	

Table 86. Language Arts – Female

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	620.82	1.89	12	328.53	0.000
Treatment (S)	-2.54	2.44	12	-1.04	0.320
Num eligible students (S)	-0.09	0.07	12	-1.42	0.182
Yr in need of improvement (S)	1.53	0.96	12	1.60	0.136
Num. ELL students (S)	0.22	0.10	12	2.28	0.042
Num. Special Education students (S)	0.17	0.16	12	1.06	0.313
Mean score of schools (S)	1.01	0.63	12	1.61	0.133
Eligible free/reduced lunch	0.13	1.90	347	0.07	0.945
English Language Learners	-2.72	2.29	347	-1.19	0.236
Special Education student	-10.71	2.98	347	-3.59	0.001
Rec'd supplemental reading instruct	1.97	5.01	347	0.39	0.694
African-American	-2.19	3.01	347	-0.73	0.469
Grade 8	10.08	2.87	347	3.51	0.001
Baseline NJ score	9.80	1.14	347	8.58	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	21.64	0.045
Level-1 Residual	Student	456.71	

Table 87. Language Arts – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	608.07	2.12	12	287.30	0.000
Treatment (S)	2.40	2.68	12	0.90	0.389
Num eligible students (S)	-0.10	0.06	12	-1.85	0.089
Yr in need of improvement (S)	0.06	1.08	12	0.06	0.957
Num. ELL students (S)	0.26	0.10	12	2.65	0.022
Num. Special Education students (S)	0.12	0.15	12	0.84	0.416
Mean score of schools (S)	0.29	0.50	12	0.59	0.568
Eligible free/reduced lunch	-0.06	3.95	377	-0.02	0.987
English Language Learners	-5.65	3.26	377	-1.73	0.083
Special Education student	-8.82	2.96	377	-2.98	0.004
Rec'd supplemental reading instruct	10.30	5.84	377	1.76	0.078
African-American	0.73	2.48	377	0.30	0.768
Grade 8	16.45	2.62	377	6.29	0.000
Baseline NJ score	7.20	1.31	377	5.48	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	31.51	0.071

Level-1 Residual	Student	412.59

Table 88. Language Arts – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	614.02	2.04	12	301.66	0.000
Treatment (S)	-0.40	2.70	12	-0.15	0.886
Num eligible students (S)	-0.09	0.09	12	-0.93	0.372
Yr in need of improvement (S)	0.24	1.31	12	0.18	0.861
Num. ELL students (S)	0.24	0.12	12	1.93	0.077
Num. Special Education students (S)	0.10	0.17	12	0.57	0.580
Mean score of schools (S)	0.38	0.48	12	0.79	0.445
Males	-5.78	1.46	398	-3.96	0.000
Eligible free/reduced lunch	-0.87	2.41	398	-0.36	0.718
English Language Learners	3.75	6.03	398	0.62	0.534
Special Education student	-8.94	3.04	398	-2.95	0.004
Rec'd supplemental reading instruct	1.88	6.85	398	0.27	0.784
Grade 8	16.80	2.27	398	7.40	0.000
Baseline NJ score	6.20	1.25	398	4.96	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	48.53		0.107	
Level-1 Residual	Student	407.04			

Table 89. Language Arts – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	611.30	3.97	8	154.01	0.000
Treatment (S)	7.58	4.43	8	1.71	0.125
Num eligible students (S)	-0.14	0.13	8	-1.14	0.290
Yr in need of improvement (S)	0.79	1.28	8	0.61	0.556
Num. ELL students (S)	0.34	0.19	8	1.82	0.105
Num. Special Education students (S)	0.13	0.32	8	0.41	0.695
Mean score of schools (S)	0.67	0.74	8	0.91	0.391
Males	-8.63	1.82	314	-4.73	0.000
Eligible free/reduced lunch	5.39	4.99	314	1.08	0.281
English Language Learners	-5.44	1.66	314	-3.27	0.002
Special Education student	-10.45	2.80	314	-3.73	0.000
Rec'd supplemental reading instruct	14.70	5.97	314	2.46	0.015
Grade 8	7.87	2.57	314	3.06	0.003
Baseline NJ score	11.35	1.31	314	8.64	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	64.48		0.129	

Level-1 Residual	Student	433.68

Table 90. Language Arts – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	604.60	2.89	11	209.07	0.000
Treatment (S)	0.21	3.92	11	0.06	0.958
Num eligible students (S)	-0.09	0.08	11	-1.12	0.288
Yr in need of improvement (S)	0.96	1.44	11	0.66	0.521
Num. ELL students (S)	0.44	0.09	11	4.69	0.001
Num. Special Education students (S)	-0.08	0.12	11	-0.66	0.522
Mean score of schools (S)	0.20	0.70	11	0.30	0.774
Males	-3.68	2.12	280	-1.73	0.084
Eligible free/reduced lunch	-1.33	4.25	280	-0.31	0.755
English Language Learners	-0.32	8.58	280	-0.04	0.971
Rec'd supplemental reading instruct	7.92	13.85	280	0.57	0.567
African-American	2.96	2.75	280	1.08	0.283
Grade 8	15.67	2.86	280	5.48	0.000
Baseline NJ score	6.99	1.20	280	5.82	0.000

Random Effects

Variance Components		Estimate	ICC
Level-2 Random Intercept	School	75.77	0.141
Level-1 Residual	Student	462.41	

C16. Analysis Group 1 – Attendance -- Year 1 6-8th Grades and Year 2 6th Grade combined

Table 91. Attendance – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.15	0.06	12	51.40	0.000
Treatment (S)	1.06	0.08	12	0.73	0.477
Num eligible students (S)	1.01	0.00	12	3.35	0.006
Yr in need of improvement (S)	1.02	0.03	12	0.74	0.472
Num. ELL students (S)	1.00	0.00	12	0.52	0.615
Num. Special Education students (S)	0.98	0.00	12	-4.37	0.001
Mean score of schools (S)	0.96	0.01	12	-2.56	0.025
Males	0.97	0.04	1693	-0.71	0.478
English Language Learners	0.66	0.08	1693	-5.04	0.000
Special Education student	0.89	0.05	1693	-2.22	0.027
Rec'd supplemental reading instruct	0.84	0.08	1693	-2.21	0.027
African-American	1.01	0.07	1693	0.12	0.907
Grade 6	0.90	0.08	1693	-1.41	0.159
Grade 7	1.04	0.06	1693	0.61	0.545
Grade 8	1.27	0.10	1693	2.44	0.015
Baseline NJ score	0.95	0.02	1693	-2.13	0.033

Table 92. Attendance – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	22.88	0.06	12	48.95	0.000
Treatment (S)	1.09	0.09	12	0.88	0.396
Num eligible students (S)	1.01	0.00	12	4.24	0.001
Yr in need of improvement (S)	1.00	0.04	12	0.03	0.979
Num. ELL students (S)	1.00	0.00	12	-0.24	0.819
Num. Special Education students (S)	0.98	0.00	12	-3.91	0.002
Mean score of schools (S)	0.96	0.02	12	-2.63	0.023
English Language Learners	0.62	0.12	745	-4.12	0.000
Special Education student	0.89	0.10	745	-1.19	0.234
Rec'd supplemental reading instruct	0.87	0.11	745	-1.18	0.238
African-American	1.03	0.08	745	0.38	0.701
Grade 6	0.80	0.14	745	-1.56	0.118
Grade 7	0.95	0.10	745	-0.46	0.646
Grade 8	1.30	0.14	745	1.93	0.054
Baseline NJ score	0.96	0.04	745	-1.05	0.292

Table 93. Attendance – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.08	0.07	12	49.31	0.000
Treatment (S)	1.03	0.08	12	0.40	0.697
Num eligible students (S)	1.00	0.00	12	1.93	0.078
Yr in need of improvement (S)	1.04	0.03	12	1.36	0.200
Num. ELL students (S)	1.00	0.00	12	1.32	0.210
Num. Special Education students (S)	0.99	0.00	12	-3.43	0.006
Mean score of schools (S)	0.97	0.01	12	-2.16	0.052
English Language Learners	0.73	0.07	934	-4.35	0.000
Special Education student	0.90	0.07	934	-1.53	0.126
Rec'd supplemental reading instruct	0.80	0.08	934	-3.03	0.003
African-American	1.00	0.09	934	0.02	0.984
Grade 6	0.99	0.06	934	-0.16	0.870
Grade 7	1.12	0.07	934	1.57	0.116
Grade 8	1.26	0.09	934	2.53	0.012
Baseline NJ score	0.95	0.03	934	-1.84	0.066

Table 94. Attendance – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.50	0.06	12	54.24	0.000
Treatment (S)	1.12	0.08	12	1.37	0.197
Num eligible students (S)	1.00	0.00	12	1.54	0.149
Yr in need of improvement (S)	1.05	0.04	12	1.32	0.212
Num. ELL students (S)	1.00	0.00	12	0.92	0.376
Num. Special Education students (S)	0.99	0.00	12	-2.28	0.042
Mean score of schools (S)	0.98	0.02	12	-0.98	0.347
Males	0.95	0.06	973	-0.86	0.391
English Language Learners	0.37	0.38	973	-2.60	0.010
Special Education student	0.89	0.06	973	-2.04	0.041
Rec'd supplemental reading instruct	0.84	0.11	973	-1.49	0.136
Grade 6	0.98	0.10	973	-0.25	0.801
Grade 7	1.00	0.09	973	-0.03	0.973
Grade 8	1.32	0.12	973	2.29	0.022
Baseline NJ score	0.94	0.03	973	-2.29	0.022

Table 95. Attendance – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.40	0.08	10	38.07	0.000
Treatment (S)	1.15	0.11	10	1.28	0.229
Num eligible students (S)	1.01	0.00	10	1.77	0.107
Yr in need of improvement (S)	1.05	0.05	10	0.96	0.358
Num. ELL students (S)	1.00	0.00	10	0.99	0.345
Num. Special Education students (S)	0.99	0.01	10	-1.75	0.111
Mean score of schools (S)	1.00	0.03	10	-0.08	0.936
Males	0.98	0.03	677	-0.64	0.523
English Language Learners	0.69	0.10	677	-3.91	0.000
Special Education student	0.90	0.09	677	-1.10	0.271
Rec'd supplemental reading instruct	0.77	0.05	677	-4.82	0.000
Grade 6	0.81	0.08	677	-2.78	0.006
Grade 7	1.09	0.07	677	1.18	0.238
Grade 8	1.22	0.12	677	1.71	0.087
Baseline NJ score	0.96	0.03	677	-1.12	0.262

Table 96. Attendance – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.93	0.07	12	43.59	0.000
Treatment (S)	1.04	0.10	12	0.40	0.695
Num eligible students (S)	1.00	0.00	12	1.63	0.130
Yr in need of improvement (S)	1.04	0.04	12	1.12	0.285
Num. ELL students (S)	1.00	0.00	12	1.10	0.294
Num. Special Education students (S)	0.99	0.01	12	-2.63	0.022
Mean score of schools (S)	0.97	0.02	12	-1.77	0.101
Males	0.95	0.05	679	-0.94	0.348
English Language Learners	1.23	0.14	679	1.47	0.142
Rec'd supplemental reading instruct	0.83	0.12	679	-1.56	0.119
African-American	1.04	0.08	679	0.48	0.629
Grade 6	1.02	0.08	679	0.29	0.768
Grade 7	0.99	0.12	679	-0.05	0.961
Grade 8	1.25	0.08	679	2.81	0.006
Baseline NJ score	0.93	0.02	679	-2.73	0.007

C17. Analysis Group 2 – Attendance -- Year 1 6th Grade and Year 2 6th Grade combined

Table 97. Attendance – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	23.30	0.09	12	34.80	0.000
Treatment (S)	0.95	0.12	12	-0.38	0.709
Num eligible students (S)	1.01	0.00	12	2.40	0.033
Yr in need of improvement (S)	1.05	0.04	12	1.10	0.293
Num. ELL students (S)	1.00	0.00	12	-0.23	0.826
Num. Special Education students (S)	0.99	0.01	12	-2.54	0.026
Mean score of schools (S)	0.96	0.02	12	-1.57	0.142
Males	1.01	0.05	829	0.11	0.912
English Language Learners	0.83	0.06	829	-3.16	0.002
Special Education student	1.00	0.06	829	-0.05	0.962
Rec'd supplemental reading instruct	0.90	0.10	829	-1.01	0.314
African-American	1.01	0.07	829	0.09	0.926
Grade 6	0.90	0.08	829	-1.31	0.192
Baseline NJ score	0.94	0.03	829	-2.42	0.016

Table 98. Attendance – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	22.09	0.08	12	40.71	0.000
Treatment (S)	1.00	0.12	12	-0.04	0.969
Num eligible students (S)	1.01	0.00	12	2.79	0.017
Yr in need of improvement (S)	1.01	0.05	12	0.19	0.851
Num. ELL students (S)	1.00	0.00	12	-0.61	0.554
Num. Special Education students (S)	0.98	0.01	12	-2.41	0.033
Mean score of schools (S)	0.94	0.02	12	-2.58	0.024
English Language Learners	0.72	0.11	375	-3.07	0.003
Special Education student	1.02	0.08	375	0.31	0.759
Rec'd supplemental reading instruct	0.98	0.16	375	-0.15	0.879
African-American	0.91	0.08	375	-1.17	0.244
Grade 6	0.80	0.15	375	-1.57	0.118
Baseline NJ score	0.93	0.04	375	-1.65	0.099

Table 99. Attendance – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.56	0.10	12	31.06	0.000
Treatment (S)	0.90	0.13	12	-0.75	0.468
Num eligible students (S)	1.00	0.00	12	1.52	0.153
Yr in need of improvement (S)	1.09	0.04	12	2.11	0.056
Num. ELL students (S)	1.00	0.00	12	0.55	0.593
Num. Special Education students (S)	0.99	0.01	12	-2.31	0.040
Mean score of schools (S)	0.98	0.03	12	-0.74	0.473
English Language Learners	0.99	0.14	442	-0.07	0.941
Special Education student	0.96	0.09	442	-0.42	0.675
Rec'd supplemental reading instruct	0.82	0.12	442	-1.54	0.123
African-American	1.10	0.11	442	0.88	0.382
Grade 6	0.98	0.06	442	-0.29	0.772
Baseline NJ score	0.94	0.03	442	-2.39	0.018

Table100. Attendance - African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.51	0.12	12	26.59	0.000
Treatment (S)	1.05	0.16	12	0.33	0.747
Num eligible students (S)	1.01	0.00	12	2.30	0.040
Yr in need of improvement (S)	1.09	0.06	12	1.61	0.133
Num. ELL students (S)	1.00	0.00	12	-0.19	0.857
Num. Special Education students (S)	0.99	0.01	12	-2.84	0.015
Mean score of schools (S)	0.96	0.03	12	-1.51	0.158
Males	1.06	0.08	465	0.77	0.441
English Language Learners	0.33	0.51	465	-2.17	0.030
Special Education student	0.92	0.08	465	-0.96	0.336
Rec'd supplemental reading instruct	0.90	0.13	465	-0.81	0.421
Grade 6	0.95	0.10	465	-0.47	0.636
Baseline NJ score	0.94	0.03	465	-1.95	0.052

Table101. Attendance – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.48	0.11	9	26.70	0.000
Treatment (S)	0.94	0.18	9	-0.35	0.738
Num eligible students (S)	1.01	0.00	9	1.45	0.181
Yr in need of improvement (S)	1.10	0.06	9	1.67	0.129
Num. ELL students (S)	1.00	0.01	9	0.04	0.971
Num. Special Education students (S)	0.99	0.01	9	-1.23	0.250
Mean score of schools (S)	1.02	0.04	9	0.46	0.658
Males	0.94	0.05	334	-1.37	0.173
English Language Learners	0.85	0.06	334	-2.69	0.008
Special Education student	1.09	0.07	334	1.18	0.239
Rec'd supplemental reading instruct	0.84	0.08	334	-2.27	0.024
Grade 6	0.83	0.08	334	-2.34	0.020
Baseline NJ score	0.95	0.04	334	-1.23	0.220

Table 102. Attendance - Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	26.64	0.11	12	29.08	0.000
Treatment (S)	0.89	0.14	12	-0.84	0.417
Num eligible students (S)	1.01	0.00	12	2.35	0.037
Yr in need of improvement (S)	1.05	0.05	12	1.11	0.291
Num. ELL students (S)	1.00	0.00	12	0.22	0.834
Num. Special Education students (S)	0.98	0.01	12	-2.77	0.018
Mean score of schools (S)	0.95	0.03	12	-1.98	0.071
Males	0.95	0.08	354	-0.71	0.477
English Language Learners	1.10	0.18	354	0.56	0.574
Rec'd supplemental reading instruct	0.87	0.12	354	-1.11	0.267
African-American	0.94	0.08	354	-0.72	0.475
Grade 6	1.01	0.07	354	0.18	0.856
Baseline NJ score	0.95	0.03	354	-1.53	0.126

C18. Analysis Group 3 – Attendance – Year 2 7th Grade

Table 103. Attendance – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.40	0.07	12	45.84	0.000
Treatment (S)	1.19	0.12	12	1.48	0.166
Num eligible students (S)	1.00	0.00	12	1.13	0.283
Yr in need of improvement (S)	1.07	0.03	12	2.21	0.048
Num. ELL students (S)	1.00	0.00	12	0.69	0.506
Num. Special Education students (S)	1.00	0.00	12	-0.11	0.913
Mean score of schools (S)	1.02	0.02	12	0.66	0.521
Males	1.04	0.08	363	0.53	0.599
Eligible free/reduced lunch	1.04	0.09	363	0.41	0.680
English Language Learners	0.75	0.24	363	-1.20	0.232
Special Education student	0.97	0.09	363	-0.35	0.728
Rec'd supplemental reading instruct	0.71	0.23	363	-1.50	0.134
African-American	1.29	0.15	363	1.76	0.079
Baseline NJ score	0.93	0.05	363	-1.37	0.171

Table 104. Attendance – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.28	0.08	11	36.32	0.000
Treatment (S)	1.20	0.12	11	1.49	0.165
Num eligible students (S)	1.01	0.00	11	3.40	0.007
Yr in need of improvement (S)	1.03	0.03	11	0.99	0.344
Num. ELL students (S)	1.00	0.00	11	-0.67	0.519
Num. Special Education students (S)	1.00	0.00	11	-0.38	0.714
Mean score of schools (S)	1.02	0.02	11	1.22	0.250
Eligible free/reduced lunch	1.23	0.16	168	1.28	0.203
English Language Learners	0.80	0.26	168	-0.87	0.386
Special Education student	1.00	0.13	168	0.00	0.997
Rec'd supplemental reading instruct	0.60	0.37	168	-1.39	0.167
African-American	1.11	0.22	168	0.48	0.634
Baseline NJ score	0.95	0.05	168	-1.10	0.274

Table 105. Attendance – Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.97	0.08	12	36.42	0.000
Treatment (S)	1.19	0.14	12	1.24	0.240
Num eligible students (S)	1.00	0.00	12	0.54	0.602
Yr in need of improvement (S)	1.12	0.05	12	2.12	0.055
Num. ELL students (S)	1.01	0.01	12	1.40	0.187
Num. Special Education students (S)	1.00	0.01	12	0.04	0.972
Mean score of schools (S)	1.03	0.04	12	0.76	0.462
Eligible free/reduced lunch	0.84	0.14	183	-1.21	0.228
English Language Learners	0.66	0.22	183	-1.90	0.059
Special Education student	0.94	0.14	183	-0.42	0.678
Rec'd supplemental reading instruct	0.76	0.27	183	-1.00	0.318
African-American	1.49	0.23	183	1.76	0.080
Baseline NJ score	0.93	0.08	183	-0.82	0.413

Table 106. Attendance – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.21	0.13	12	24.75	0.000
Treatment (S)	1.17	0.18	12	0.86	0.407
Num eligible students (S)	1.01	0.01	12	1.42	0.181
Yr in need of improvement (S)	1.07	0.07	12	0.92	0.377
Num. ELL students (S)	1.00	0.01	12	0.18	0.860
Num. Special Education students (S)	0.99	0.01	12	-0.95	0.363
Mean score of schools (S)	1.01	0.04	12	0.15	0.880
Males	1.08	0.03	196	2.73	0.007
Eligible free/reduced lunch	1.01	0.04	196	0.35	0.726
English Language Learners	0.43	0.34	196	-2.48	0.014
Special Education student	1.00	0.03	196	-0.09	0.928
Rec'd supplemental reading instruct	0.88	0.08	196	-1.65	0.101
Baseline NJ score	0.95	0.02	196	-3.37	0.001

Table 107. Attendance – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.72	0.08	7	38.32	0.000
Treatment (S)	0.72	0.23	7	-1.42	0.200
Num eligible students (S)	1.00	0.01	7	-0.35	0.739
Yr in need of improvement (S)	1.31	0.07	7	4.08	0.006
Num. ELL students (S)	0.99	0.01	7	-1.66	0.141
Num. Special Education students (S)	1.03	0.01	7	2.73	0.030
Mean score of schools (S)	1.16	0.03	7	4.36	0.004
Males	0.99	0.11	150	-0.07	0.944
Eligible free/reduced lunch	0.99	0.05	150	-0.10	0.924
English Language Learners	0.64	0.21	150	-2.12	0.035
Special Education student	0.92	0.06	150	-1.29	0.199
Rec'd supplemental reading instruct	0.55	0.39	150	-1.53	0.127
Baseline NJ score	0.92	0.08	150	-1.10	0.275

Table 108. Attendance - Special Education

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.97	0.09	11	36.14	0.000
Treatment (S)	1.15	0.13	11	1.09	0.301
Num eligible students (S)	1.01	0.00	11	2.90	0.015
Yr in need of improvement (S)	1.06	0.06	11	1.02	0.330
Num. ELL students (S)	1.00	0.01	11	-0.65	0.526
Num. Special Education students (S)	0.99	0.01	11	-1.74	0.109
Mean score of schools (S)	0.99	0.03	11	-0.23	0.820
Males	0.95	0.10	147	-0.50	0.620
Eligible free/reduced lunch	1.17	0.16	147	0.96	0.339
English Language Learners	0.65	0.70	147	-0.63	0.533
Rec'd supplemental reading instruct	0.94	0.44	147	-0.15	0.883
African-American	1.17	0.20	147	0.78	0.438
Baseline NJ score	0.99	0.07	147	-0.10	0.923

C19. Analysis Group 4 – Attendance – Year 2 8th Grade

Table 109. Attendance – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	27.12	0.08	12	43.60	0.000
Treatment (S)	0.97	0.15	12	-0.24	0.815
Num eligible students (S)	1.01	0.00	12	1.73	0.109
Yr in need of improvement (S)	1.03	0.05	12	0.65	0.527
Num. ELL students (S)	0.99	0.00	12	-1.09	0.298
Num. Special Education students (S)	1.00	0.01	12	0.04	0.972
Mean score of schools (S)	1.01	0.03	12	0.44	0.664
Males	0.99	0.10	263	-0.06	0.956
Eligible free/reduced lunch	1.26	0.17	263	1.33	0.184
English Language Learners	0.74	0.09	263	-3.39	0.001
Special Education student	0.92	0.13	263	-0.64	0.520
Rec'd supplemental reading instruct	0.72	0.29	263	-1.14	0.258
African-American	0.80	0.15	263	-1.51	0.133
Baseline NJ score	0.88	0.08	263	-1.70	0.090

Table 110. Attendance – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.14	0.05	11	60.80	0.000
Treatment (S)	1.29	0.08	11	3.03	0.012
Num eligible students (S)	1.01	0.00	11	4.78	0.000
Yr in need of improvement (S)	1.06	0.03	11	1.89	0.085
Num. ELL students (S)	1.00	0.00	11	-1.17	0.268
Num. Special Education students (S)	1.00	0.00	11	0.68	0.512
Mean score of schools (S)	1.04	0.02	11	2.45	0.032
Eligible free/reduced lunch	1.60	0.29	121	1.61	0.111
English Language Learners	0.71	0.18	121	-1.87	0.064
Special Education student	0.91	0.15	121	-0.63	0.528
Rec'd supplemental reading instruct	0.50	0.30	121	-2.29	0.024
African-American	0.90	0.16	121	-0.66	0.509
Baseline NJ score	1.01	0.05	121	0.11	0.915

Table 111. Attendance - Male

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	30.94	0.09	12	38.26	0.000
Treatment (S)	0.81	0.21	12	-0.99	0.340
Num eligible students (S)	1.00	0.01	12	0.19	0.852
Yr in need of improvement (S)	1.03	0.08	12	0.38	0.713
Num. ELL students (S)	1.00	0.01	12	0.16	0.878
Num. Special Education students (S)	1.00	0.01	12	-0.08	0.937
Mean score of schools (S)	0.99	0.05	12	-0.14	0.892
Eligible free/reduced lunch	1.07	0.22	130	0.29	0.770
English Language Learners	1.46	0.19	130	2.05	0.042
Special Education student	0.91	0.21	130	-0.45	0.651
Rec'd supplemental reading instruct	1.22	0.35	130	0.56	0.576
African-American	0.89	0.13	130	-0.86	0.390
Baseline NJ score	0.80	0.07	130	-3.07	0.003

Table 112. Attendance – African-American

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	27.71	0.16	11	20.85	0.000
Treatment (S)	0.78	0.22	11	-1.14	0.277
Num eligible students (S)	1.01	0.01	11	1.17	0.267
Yr in need of improvement (S)	0.95	0.09	11	-0.59	0.568
Num. ELL students (S)	0.99	0.01	11	-0.86	0.409
Num. Special Education students (S)	1.00	0.01	11	-0.29	0.776
Mean score of schools (S)	1.03	0.05	11	0.51	0.618
Males	1.03	0.03	157	1.04	0.299
Eligible free/reduced lunch	1.12	0.04	157	2.73	0.008
English Language Learners	0.68	0.23	157	-1.62	0.106
Special Education student	0.96	0.04	157	-1.09	0.276
Rec'd supplemental reading instruct	0.53	0.17	157	-3.85	0.000
Baseline NJ score	0.81	0.02	157	-11.82	0.000

Table113. Attendance – Hispanic

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	29.12	0.19	6	17.71	0.000
Treatment (S)	1.36	0.29	6	1.03	0.342
Num eligible students (S)	0.99	0.01	6	-1.25	0.257
Yr in need of improvement (S)	1.21	0.11	6	1.74	0.131
Num. ELL students (S)	1.00	0.01	6	-0.44	0.673
Num. Special Education students (S)	1.04	0.02	6	2.16	0.073
Mean score of schools (S)	1.08	0.07	6	1.06	0.332
Males	0.93	0.04	89	-2.01	0.048
Eligible free/reduced lunch	1.90	0.08	89	8.49	0.000
English Language Learners	0.80	0.08	89	-2.90	0.005
Special Education student	0.81	0.04	89	-4.64	0.000
Rec'd supplemental reading instruct	0.90	0.63	89	-0.17	0.870
Baseline NJ score	1.03	0.02	89	1.37	0.175

Table 114. Attendance - Special Education

Fixed Effects					
Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	37.74	0.19	10	18.72	0.000
Treatment (S)	0.76	0.24	10	-1.11	0.294
Num eligible students (S)	1.01	0.01	10	2.04	0.069
Yr in need of improvement (S)	1.05	0.09	10	0.56	0.587
Num. ELL students (S)	1.00	0.01	10	-0.36	0.728
Num. Special Education students (S)	0.98	0.01	10	-1.56	0.150
Mean score of schools (S)	1.04	0.02	10	1.48	0.169
Males	1.08	0.19	93	0.38	0.702
Eligible free/reduced lunch	1.81	0.21	93	2.82	0.006
English Language Learners	0.75	0.20	93	-1.45	0.150
Rec'd supplemental reading instruct	0.38	0.49	93	-1.96	0.052
African-American	0.99	0.15	93	-0.09	0.928
Baseline NJ score	0.90	0.12	93	-0.84	0.401

C20. Analysis Group 5 – Attendance – Year 2 7th & 8th Grade

Table 115. Attendance – Overall

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	23.80	0.05	12	67.86	0.000
Treatment (S)	1.10	0.08	12	1.21	0.249
Num eligible students (S)	1.00	0.00	12	1.62	0.132
Yr in need of improvement (S)	1.07	0.03	12	1.96	0.073
Num. ELL students (S)	1.00	0.00	12	-0.13	0.902
Num. Special Education students (S)	1.00	0.00	12	0.30	0.766
Mean score of schools (S)	1.01	0.02	12	0.87	0.403
Males	1.03	0.07	639	0.43	0.668
Eligible free/reduced lunch	1.16	0.08	639	1.71	0.087
English Language Learners	0.73	0.14	639	-2.27	0.023
Special Education student	0.94	0.06	639	-1.04	0.297
Rec'd supplemental reading instruct	0.74	0.13	639	-2.25	0.025
African-American	1.03	0.12	639	0.29	0.774
Grade 8	1.16	0.06	639	2.31	0.021
Baseline NJ score	0.91	0.05	639	-1.77	0.076

Table 116. Attendance – Female

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.69	0.06	11	48.90	0.000
Treatment (S)	1.26	0.09	11	2.76	0.019
Num eligible students (S)	1.01	0.00	11	5.23	0.000
Yr in need of improvement (S)	1.03	0.02	11	1.32	0.213
Num. ELL students (S)	1.00	0.00	11	-1.06	0.314
Num. Special Education students (S)	1.00	0.00	11	-0.19	0.851
Mean score of schools (S)	1.03	0.02	11	1.66	0.124
Eligible free/reduced lunch	1.39	0.10	301	3.30	0.001
English Language Learners	0.74	0.18	301	-1.71	0.087
Special Education student	0.98	0.09	301	-0.28	0.781
Rec'd supplemental reading instruct	0.55	0.31	301	-1.96	0.050
African-American	0.98	0.14	301	-0.14	0.887
Grade 8	1.16	0.08	301	1.98	0.049
Baseline NJ score	0.99	0.03	301	-0.48	0.633

Table 117. Attendance – Male

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.98	0.05	12	60.09	0.000
Treatment (S)	0.98	0.12	12	-0.21	0.835
Num eligible students (S)	1.00	0.00	12	0.08	0.938
Yr in need of improvement (S)	1.09	0.05	12	1.66	0.123
Num. ELL students (S)	1.00	0.01	12	0.57	0.577
Num. Special Education students (S)	1.00	0.01	12	0.44	0.671
Mean score of schools (S)	1.02	0.04	12	0.52	0.614
Eligible free/reduced lunch	1.04	0.13	325	0.28	0.781
English Language Learners	0.82	0.15	325	-1.29	0.199
Special Education student	0.93	0.11	325	-0.71	0.481
Rec'd supplemental reading instruct	0.95	0.28	325	-0.18	0.857
African-American	1.11	0.13	325	0.87	0.388
Grade 8	1.11	0.11	325	0.92	0.359
Baseline NJ score	0.84	0.08	325	-2.10	0.037

Table 118. Attendance – African-American

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	26.16	0.08	12	41.43	0.000
Treatment (S)	0.98	0.11	12	-0.20	0.844
Num eligible students (S)	1.01	0.00	12	2.80	0.016
Yr in need of improvement (S)	1.02	0.04	12	0.34	0.742
Num. ELL students (S)	1.00	0.01	12	-0.46	0.651
Num. Special Education students (S)	0.99	0.01	12	-1.44	0.176
Mean score of schools (S)	1.01	0.02	12	0.62	0.549
Eligible free/reduced lunch	1.08	0.10	365	0.81	0.420
English Language Learners	1.06	0.08	365	0.73	0.469
Special Education student	0.74	0.23	365	-1.33	0.185
Rec'd supplemental reading instruct	0.97	0.09	365	-0.29	0.775
African-American	0.75	0.15	365	-1.87	0.062
Grade 8	1.02	0.10	365	0.17	0.866
Baseline NJ score	0.90	0.04	365	-2.44	0.015

Table119. Attendance – Hispanic

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	28.55	0.09	8	38.48	0.000
Treatment (S)	0.88	0.18	8	-0.73	0.486
Num eligible students (S)	1.00	0.00	8	-0.70	0.501
Yr in need of improvement (S)	1.26	0.06	8	4.00	0.005
Num. ELL students (S)	0.99	0.01	8	-1.79	0.110
Num. Special Education students (S)	1.03	0.01	8	4.72	0.001
Mean score of schools (S)	1.12	0.03	8	3.87	0.006
Males	0.94	0.05	251	-1.11	0.270
Eligible free/reduced lunch	1.29	0.10	251	2.58	0.011
English Language Learners	0.67	0.13	251	-3.15	0.002
Special Education student	0.88	0.06	251	-2.19	0.029
Rec'd supplemental reading instruct	0.53	0.34	251	-1.90	0.058
Grade 8	1.31	0.07	251	3.93	0.000
Baseline NJ score	0.95	0.07	251	-0.76	0.447

Table 120. Attendance – Special Education

Fixed Effects

Effect	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	27.58	0.09	11	36.56	0.000
Treatment (S)	1.01	0.13	11	0.08	0.938
Num eligible students (S)	1.01	0.00	11	2.54	0.028
Yr in need of improvement (S)	1.04	0.04	11	0.80	0.439
Num. ELL students (S)	1.00	0.00	11	-0.93	0.371
Num. Special Education students (S)	0.99	0.00	11	-1.96	0.075
Mean score of schools (S)	1.00	0.02	11	0.20	0.844
Males	1.05	0.14	252	0.33	0.741
Eligible free/reduced lunch	1.36	0.15	252	2.05	0.041
English Language Learners	0.70	0.42	252	-0.84	0.401
Rec'd supplemental reading instruct	0.56	0.49	252	-1.19	0.237
African-American	1.09	0.15	252	0.61	0.544
Grade 8	1.18	0.16	252	1.04	0.298
Baseline NJ score	0.92	0.10	252	-0.84	0.403

C21. Analysis Group 1 – Attendance, Outlier Removed – Year 1 6-8th Grades and Year 2 6th Grade combined

Table 121. Attendance – Overall

Fixed Effects

	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	23.84	0.06	11	54.59	0.000
Treatment (S)	1.10	0.08	11	1.30	0.219
Num eligible students (S)	1.01	0.00	11	3.71	0.004
Yr in need of improvement (S)	1.04	0.03	11	1.22	0.247
Num. ELL students (S)	1.00	0.00	11	0.73	0.481
Num. Special Education students (S)	0.98	0.00	11	-4.35	0.001
Mean score of schools (S)	0.96	0.01	11	-3.04	0.012
Males	0.97	0.05	1520	-0.62	0.538
English Language Learners	0.70	0.08	1520	-4.69	0.000
Special Education student	0.92	0.05	1520	-1.78	0.074
Rec'd supplemental reading instruct	0.86	0.09	1520	-1.71	0.086
African-American	0.99	0.07	1520	-0.15	0.878
Grade 6	0.89	0.08	1520	-1.39	0.166
Grade 7	1.02	0.06	1520	0.31	0.758
Grade 8	1.24	0.10	1520	2.10	0.036
Baseline NJ score	0.96	0.03	1520	-1.66	0.097

Table 122. Attendance –Females

Fixed Effects

	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	22.30	0.06	11	54.44	0.000
Treatment (S)	1.16	0.10	11	1.51	0.160
Num eligible students (S)	1.01	0.00	11	2.69	0.021
Yr in need of improvement (S)	1.05	0.04	11	1.22	0.248
Num. ELL students (S)	1.00	0.00	11	0.09	0.935
Num. Special Education students (S)	0.99	0.01	11	-2.16	0.053
Mean score of schools (S)	0.99	0.02	11	-0.75	0.469
English Language Learners	0.69	0.08	667	-4.63	0.000
Special Education student	0.92	0.11	667	-0.83	0.409
Rec'd supplemental reading instruct	0.90	0.13	667	-0.87	0.384
African-American	1.04	0.09	667	0.39	0.694
Grade 6	0.81	0.14	667	-1.48	0.139

Grade 7	0.97	0.10	667	-0.35	0.726
Grade 8	1.29	0.14	667	1.82	0.069
Baseline NJ score	0.96	0.05	667	-0.80	0.426

Table 123. Attendance –Males

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.13	0.07	11	47.43	0.000
Treatment (S)	1.05	0.08	11	0.61	0.556
Num eligible students (S)	1.00	0.00	11	1.60	0.138
Yr in need of improvement (S)	1.06	0.03	11	1.75	0.107
Num. ELL students (S)	1.00	0.00	11	1.41	0.186
Num. Special Education students (S)	0.99	0.00	11	-2.74	0.020
Mean score of schools (S)	0.97	0.01	11	-1.93	0.080
English Language Learners	0.73	0.09	839	-3.59	0.001
Special Education student	0.93	0.07	839	-1.08	0.282
Rec'd supplemental reading instruct	0.81	0.09	839	-2.40	0.017
African-American	0.97	0.09	839	-0.38	0.705
Grade 6	0.98	0.06	839	-0.25	0.802
Grade 7	1.07	0.06	839	1.10	0.270
Grade 8	1.22	0.09	839	2.18	0.030
Baseline NJ score	0.96	0.03	839	-1.42	0.155

Table 124. Attendance –African-American

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.20	0.06	11	55.11	0.000
Treatment (S)	1.13	0.07	11	1.78	0.103
Num eligible students (S)	1.00	0.00	11	2.04	0.065
Yr in need of improvement (S)	1.03	0.03	11	1.06	0.312
Num. ELL students (S)	1.01	0.00	11	1.83	0.094
Num. Special Education students (S)	0.99	0.00	11	-3.32	0.008
Mean score of schools (S)	0.95	0.01	11	-4.26	0.001
Males	0.95	0.06	931	-0.87	0.384
English Language Learners	0.37	0.37	931	-2.67	0.008
Special Education student	0.89	0.06	931	-1.89	0.059
Rec'd supplemental reading instruct	0.85	0.12	931	-1.39	0.166
Grade 6	0.97	0.10	931	-0.26	0.795
Grade 7	0.97	0.08	931	-0.40	0.687
Grade 8	1.31	0.13	931	2.11	0.035
Baseline NJ score	0.95	0.03	931	-2.02	0.043

Table 125. Attendance – Hispanic

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.08	0.08	9	39.53	0.000
Treatment (S)	1.19	0.12	9	1.37	0.203
Num eligible students (S)	1.01	0.00	9	2.55	0.031
Yr in need of improvement (S)	1.07	0.03	9	1.88	0.092
Num. ELL students (S)	1.00	0.00	9	1.06	0.319
Num. Special Education students (S)	0.99	0.01	9	-2.55	0.031
Mean score of schools (S)	0.99	0.01	9	-0.49	0.638
Males	0.99	0.03	548	-0.32	0.749
English Language Learners	0.75	0.08	548	-3.67	0.000
Special Education Student	0.99	0.06	548	-0.14	0.888
Rec'd supplemental reading instruct	0.81	0.08	548	-2.59	0.010
Grade 6	0.80	0.07	548	-3.14	0.002
Grade 7	1.11	0.08	548	1.34	0.182
Grade 8	1.17	0.14	548	1.11	0.266
Baseline NJ score	0.98	0.04	548	-0.58	0.559

Table 126. Attendance – Special Education

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.06	0.08	11	37.46	0.000
Treatment (S)	1.14	0.12	11	1.07	0.309
Num eligible students (S)	1.00	0.00	11	0.88	0.399
Yr in need of improvement (S)	1.06	0.03	11	2.01	0.070
Num. ELL students (S)	1.01	0.00	11	1.54	0.152
Num. Special Education students (S)	0.99	0.01	11	-1.49	0.164
Mean score of schools (S)	0.98	0.01	11	-1.91	0.082
Males	0.95	0.06	614	-0.81	0.420
English Language Learners	1.24	0.14	614	1.56	0.120
Rec'd supplemental reading instruct	0.82	0.15	614	-1.28	0.201
African-American	0.98	0.07	614	-0.26	0.797
Grade 6	0.99	0.07	614	-0.12	0.905
Grade 7	0.93	0.11	614	-0.70	0.482
Grade 8	1.24	0.08	614	2.53	0.012
Baseline NJ score	0.94	0.03	614	-2.30	0.022

C22. Analysis Group 2 – Attendance, Outlier removed -- Year 1 6th Grade and Year 2 6th Grade combined

Table 127. Attendance – Overall

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	22.68	0.09	11	34.94	0.000
Treatment (S)	1.02	0.12	11	0.15	0.885
Num eligible students (S)	1.01	0.00	11	3.07	0.011
Yr in need of improvement (S)	1.07	0.04	11	1.47	0.171
Num. ELL students (S)	1.00	0.00	11	0.11	0.913
Num. Special Education students (S)	0.99	0.01	11	-2.62	0.024
Mean score of schools (S)	0.96	0.02	11	-2.03	0.067
Males	1.02	0.06	771	0.38	0.707
English Language Learners	0.83	0.06	771	-2.99	0.003
Special Education student	1.01	0.06	771	0.15	0.884
Rec'd supplemental reading instruct	0.91	0.11	771	-0.90	0.370

African-American	1.00	0.07	771	0.05	0.962
Grade 6	0.88	0.08	771	-1.55	0.120
Baseline NJ score	0.94	0.03	771	-2.13	0.034

Table 128. Attendance – Females

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.47	0.08	11	40.70	0.000
Treatment (S)	1.07	0.15	11	0.42	0.681
Num eligible students (S)	1.00	0.00	11	1.07	0.309
Yr in need of improvement (S)	1.08	0.06	11	1.31	0.218
Num. ELL students (S)	1.00	0.00	11	0.00	0.999
Num. Special Education students (S)	0.99	0.01	11	-0.94	0.370
Mean score of schools (S)	0.99	0.03	11	-0.43	0.679
English Language Learners	0.72	0.10	352	-3.16	0.002
Special Education student	1.03	0.08	352	0.32	0.750
Rec'd supplemental reading instruct	0.97	0.17	352	-0.18	0.860
African-American	0.92	0.08	352	-0.95	0.341
Grade 6	0.80	0.14	352	-1.59	0.113
Baseline NJ score	0.93	0.04	352	-1.65	0.099

Table 129. Attendance – Males

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	23.95	0.10	11	31.89	0.000
Treatment (S)	0.97	0.14	11	-0.19	0.853
Num eligible students (S)	1.00	0.00	11	1.36	0.202
Yr in need of improvement (S)	1.14	0.04	11	3.11	0.011
Num. ELL students (S)	1.00	0.00	11	0.95	0.363
Num. Special Education students (S)	0.99	0.01	11	-1.48	0.166
Mean score of schools (S)	1.00	0.02	11	-0.25	0.805
English Language Learners	1.00	0.15	407	0.03	0.974
Special Education student	0.98	0.09	407	-0.25	0.804
Rec'd supplemental reading instruct	0.84	0.12	407	-1.35	0.177
African-American	1.07	0.11	407	0.61	0.543
Grade 6	0.96	0.06	407	-0.73	0.463
Baseline NJ score	0.94	0.03	407	-2.04	0.042

Table 130. Attendance – African-American

Fixed Effects	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.81	0.12	11	25.61	0.000
Treatment (S)	1.14	0.17	11	0.75	0.471
Num eligible students (S)	1.01	0.00	11	1.41	0.187
Yr in need of improvement (S)	1.17	0.05	11	2.85	0.016
Num. ELL students (S)	1.00	0.00	11	1.10	0.295
Num. Special Education students (S)	0.99	0.01	11	-1.49	0.164
Mean score of schools (S)	0.96	0.03	11	-1.18	0.265
Males	1.06	0.08	451	0.73	0.464
English Language Learners	0.34	0.52	451	-2.11	0.035
Special Education student	0.93	0.08	451	-0.86	0.389
Rec'd supplemental reading instruct	0.91	0.13	451	-0.70	0.482
Grade 6	0.94	0.10	451	-0.59	0.555
Baseline NJ score	0.95	0.03	451	-1.57	0.118

Table 131. Attendance – Hispanic

Fixed Effects	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	19.73	0.14	8	21.02	0.000
Treatment (S)	1.00	0.21	8	0.00	0.998
Num eligible students (S)	1.01	0.00	8	2.86	0.022
Yr in need of improvement (S)	1.11	0.04	8	2.67	0.029
Num. ELL students (S)	1.00	0.01	8	0.13	0.901
Num. Special Education students (S)	0.98	0.01	8	-2.44	0.041
Mean score of schools (S)	1.00	0.02	8	0.10	0.925
Males	0.98	0.03	291	-0.70	0.483
English Language Learners	0.87	0.06	291	-2.41	0.017
Special Education student	1.12	0.06	291	1.78	0.075
Rec'd supplemental reading instruct	0.81	0.09	291	-2.50	0.013
Grade 6	0.80	0.07	291	-3.18	0.002
Baseline NJ score	0.94	0.04	291	-1.31	0.193

Table 132. Attendance – Special Education

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.63	0.11	11	30.36	0.000
Treatment (S)	1.05	0.15	11	0.36	0.729
Num eligible students (S)	1.00	0.00	11	1.19	0.260
Yr in need of improvement (S)	1.11	0.04	11	2.48	0.031
Num. ELL students (S)	1.00	0.00	11	0.60	0.559
Num. Special Education students (S)	0.99	0.01	11	-1.07	0.309
Mean score of schools (S)	0.98	0.01	11	-2.86	0.016
Males	0.96	0.08	330	-0.50	0.614
English Language Learners	1.14	0.18	330	0.72	0.470
Rec'd supplemental reading instruct	0.90	0.12	330	-0.85	0.395
African-American	0.91	0.08	330	-1.15	0.251
Grade 6	0.98	0.07	330	-0.37	0.714
Baseline NJ score	0.97	0.03	330	-1.12	0.266

C23. Analysis Group 3 – Attendance, Outlier removed -- Year 2 7th Grade combined

Table 133. Attendance – Overall

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	20.52	0.08	11	36.76	0.000
Treatment (S)	1.29	0.13	11	1.95	0.077
Num eligible students (S)	1.00	0.00	11	1.84	0.093
Yr in need of improvement (S)	1.09	0.03	11	2.72	0.020
Num. ELL students (S)	1.00	0.00	11	1.20	0.258
Num. Special Education students (S)	1.00	0.00	11	-0.17	0.866
Mean score of schools (S)	1.01	0.02	11	0.42	0.681
Males	1.05	0.08	357	0.61	0.545
Eligible free/reduced lunch	1.04	0.09	357	0.43	0.666

English Language Learners	0.73	0.24	357	-1.30	0.195
Special Education student	0.97	0.09	357	-0.33	0.745
Rec'd supplemental reading instruct	0.71	0.21	357	-1.62	0.105
African-American	1.29	0.14	357	1.79	0.074
Baseline NJ score	0.93	0.05	357	-1.47	0.143

Table 134. Attendance – Females

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	18.70	0.09	10	34.34	0.000
Treatment (S)	1.40	0.11	10	2.96	0.015
Num eligible students (S)	1.01	0.00	10	4.46	0.001
Yr in need of improvement (S)	0.98	0.04	10	-0.42	0.680
Num. ELL students (S)	1.00	0.00	10	-0.32	0.757
Num. Special Education students (S)	0.99	0.00	10	-1.33	0.213
Mean score of schools (S)	0.98	0.01	10	-2.40	0.037
Eligible free/reduced lunch	1.23	0.16	166	1.26	0.209
English Language Learners	0.80	0.26	166	-0.86	0.390
Special Education student	1.00	0.13	166	0.02	0.984
Rec'd supplemental reading instruct	0.60	0.36	166	-1.42	0.158
African-American	1.10	0.21	166	0.46	0.643
Baseline NJ score	0.95	0.05	166	-1.07	0.289

Table 135. Attendance – Males

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.08	0.11	11	28.90	0.000
Treatment (S)	1.30	0.15	11	1.68	0.121
Num eligible students (S)	1.01	0.00	11	1.47	0.170
Yr in need of improvement (S)	1.11	0.05	11	2.14	0.055
Num. ELL students (S)	1.01	0.01	11	1.70	0.117
Num. Special Education students (S)	1.00	0.01	11	-0.63	0.542
Mean score of schools (S)	1.00	0.01	11	-0.35	0.732
Eligible free/reduced lunch	0.84	0.14	179	-1.23	0.222
English Language Learners	0.60	0.24	179	-2.13	0.034
Special Education student	0.95	0.13	179	-0.37	0.710
Rec'd supplemental reading instruct	0.77	0.25	179	-1.04	0.302
African-American	1.47	0.21	179	1.82	0.070
Baseline NJ score	0.93	0.08	179	-0.90	0.371

Table 136. Attendance – African-American

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	21.89	0.11	11	28.13	0.000
Treatment (S)	1.35	0.16	11	1.87	0.088
Num eligible students (S)	1.01	0.00	11	3.03	0.012
Yr in need of improvement (S)	1.05	0.06	11	0.86	0.407
Num. ELL students (S)	1.00	0.01	11	0.17	0.867
Num. Special Education students (S)	0.98	0.01	11	-2.17	0.053
Mean score of schools (S)	0.98	0.01	11	-2.15	0.054
Eligible free/reduced lunch	1.08	0.03	195	2.68	0.008
English Language Learners	1.01	0.04	195	0.32	0.747
Special Education student	0.43	0.34	195	-2.49	0.014
Rec'd supplemental reading instruct	0.99	0.03	195	-0.19	0.850
Baseline NJ score	0.88	0.07	195	-1.69	0.092

Table 137. Attendance – Hispanic

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	23.38	0.30	6	10.65	0.000
Treatment (S)	0.94	0.44	6	-0.14	0.896
Num eligible students (S)	1.01	0.01	6	0.46	0.664
Yr in need of improvement (S)	1.26	0.14	6	1.59	0.162
Num. ELL students (S)	0.99	0.02	6	-0.79	0.461
Num. Special Education students (S)	1.01	0.02	6	0.55	0.601
Mean score of schools (S)	1.01	0.02	6	0.46	0.664
Males	1.00	0.03	145	-0.11	0.914
Eligible free/reduced lunch	0.99	0.06	145	-0.16	0.874
English Language Learners	0.62	0.05	145	-9.23	0.000
Rec'd supplemental reading instruct	0.93	0.03	145	-2.28	0.024
Baseline NJ score	0.55	0.12	145	-5.03	0.000

Table 138. Attendance – Special Education

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.13	0.10	10	31.48	0.000
Treatment (S)	1.25	0.15	10	1.44	0.181
Num eligible students (S)	1.01	0.00	10	3.96	0.003
Yr in need of improvement (S)	1.06	0.05	10	1.16	0.274
Num. ELL students (S)	1.00	0.01	10	-0.53	0.609
Num. Special Education students (S)	0.99	0.01	10	-2.05	0.067
Mean score of schools (S)	0.99	0.01	10	-1.20	0.259
Males	0.97	0.09	145	-0.37	0.714
Eligible free/reduced lunch	1.16	0.16	145	0.93	0.356
English Language Learners	0.64	0.58	145	-0.76	0.451
Rec'd supplemental reading instruct	0.94	0.44	145	-0.15	0.885
African-American	1.16	0.20	145	0.77	0.445
Baseline NJ score	0.99	0.07	145	-0.09	0.928

C24. Analysis Group 4 – Attendance, Outlier removed -- Year 2 8th Grade combined

Table 139. Attendance – Overall

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.77	0.07	11	44.47	0.000
Treatment (S)	1.00	0.16	11	-0.03	0.981
Num eligible students (S)	1.01	0.00	11	2.00	0.071
Yr in need of improvement (S)	1.04	0.05	11	0.69	0.506
Num. ELL students (S)	1.00	0.00	11	-0.93	0.374
Num. Special Education students (S)	1.00	0.01	11	-0.09	0.932
Mean score of schools (S)	1.01	0.03	11	0.31	0.765
Males	1.01	0.10	257	0.12	0.908
Eligible free/reduced lunch	1.25	0.16	257	1.38	0.169
English Language Learners	0.74	0.09	257	-3.23	0.002
Special Education student	0.94	0.13	257	-0.47	0.639
Rec'd supplemental reading instruct	0.73	0.29	257	-1.08	0.282
African-American	0.82	0.13	257	-1.49	0.139
Baseline NJ score	0.86	0.08	257	-1.91	0.057

Table 140. Attendance – Female

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	18.64	0.05	10	60.60	0.000
Treatment (S)	1.56	0.11	10	4.19	0.002
Num eligible students (S)	1.01	0.00	10	8.12	0.000
Yr in need of improvement (S)	1.07	0.03	10	2.28	0.046
Num. ELL students (S)	1.00	0.00	10	-0.36	0.728
Num. Special Education students (S)	1.00	0.00	10	-0.18	0.862
Mean score of schools (S)	1.01	0.00	10	1.48	0.170
Eligible free/reduced lunch	1.61	0.29	118	1.62	0.107
English Language Learners	0.70	0.16	118	-2.23	0.027
Special Education student	0.95	0.14	118	-0.37	0.713
Rec'd supplemental reading instruct	0.50	0.29	118	-2.38	0.019

African-American	0.87	0.16	118	-0.89	0.377
Baseline NJ score	0.98	0.05	118	-0.46	0.647

Table 141. Attendance – Males

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	30.29	0.10	11	33.55	0.000
Treatment (S)	0.83	0.21	11	-0.86	0.409
Num eligible students (S)	1.00	0.01	11	0.02	0.982
Yr in need of improvement (S)	1.07	0.07	11	0.91	0.381
Num. ELL students (S)	1.00	0.01	11	0.09	0.929
Num. Special Education students (S)	1.00	0.01	11	0.47	0.648
Mean score of schools (S)	1.01	0.01	11	0.74	0.473
Eligible free/reduced lunch	1.07	0.21	127	0.31	0.759
English Language Learners	1.47	0.18	127	2.16	0.032
Special Education student	0.91	0.20	127	-0.45	0.650
Rec'd supplemental reading instruct	1.21	0.35	127	0.56	0.580
African-American	0.89	0.13	127	-0.87	0.386
Baseline NJ score	0.80	0.07	127	-3.14	0.003

Table 142. Attendance – African-American

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.57	0.14	10	22.48	0.000
Treatment (S)	0.87	0.20	10	-0.67	0.518
Num eligible students (S)	1.01	0.01	10	2.05	0.068
Yr in need of improvement (S)	0.96	0.07	10	-0.60	0.559
Num. ELL students (S)	0.99	0.01	10	-0.69	0.506
Num. Special Education students (S)	0.99	0.01	10	-0.71	0.496
Mean score of schools (S)	1.02	0.02	10	1.56	0.149
Males	1.03	0.03	155	1.09	0.278
Eligible free/reduced lunch	1.12	0.04	155	2.73	0.007
English Language Learners	0.68	0.24	155	-1.60	0.111
Special Education student	0.96	0.04	155	-1.01	0.313
Rec'd supplemental reading instruct	0.52	0.16	155	-3.98	0.000
Baseline NJ score	0.81	0.02	155	-11.86	0.000

Table 143. Attendance – Hispanic

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	25.47	0.15	5	21.93	0.000
Treatment (S)	1.50	0.23	5	1.74	0.141
Num eligible students (S)	1.00	0.01	5	0.15	0.886
Yr in need of improvement (S)	1.11	0.07	5	1.53	0.187
Num. ELL students (S)	1.00	0.01	5	0.52	0.626
Num. Special Education students (S)	1.01	0.02	5	0.51	0.634
Mean score of schools (S)	0.98	0.01	5	-1.55	0.182
Males	0.94	0.04	85	-1.41	0.163
Eligible free/reduced lunch	1.88	0.07	85	8.40	0.000
English Language Learners	0.80	0.08	85	-2.88	0.005
Special Education student	0.84	0.05	85	-3.90	0.000
Rec'd supplemental reading instruct	1.25	0.54	85	0.42	0.679
Baseline NJ score	1.01	0.02	85	0.30	0.768

Table 144. Attendance – Special Education

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	33.46	0.16	9	22.49	0.000
Treatment (S)	0.94	0.20	9	-0.32	0.757
Num eligible students (S)	1.01	0.01	9	1.79	0.107
Yr in need of improvement (S)	1.11	0.09	9	1.26	0.239
Num. ELL students (S)	1.00	0.01	9	0.10	0.921
Num. Special Education students (S)	0.99	0.01	9	-0.86	0.414
Mean score of schools (S)	1.02	0.01	9	1.89	0.091
Males	1.05	0.17	90	0.29	0.769
Eligible free/reduced lunch	1.81	0.24	90	2.43	0.017
English Language Learners	0.74	0.21	90	-1.44	0.154
Rec'd supplemental reading instruct	0.38	0.46	90	-2.11	0.038
Baseline NJ score	0.96	0.13	90	-0.31	0.755

C25. Analysis Group 2 – Attendance, Outlier removed -- Year 2 7th and 8th Grade combined

Table 145. Attendance – Overall

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	22.66	0.04	11	73.72	0.000
Treatment (S)	1.17	0.08	11	2.10	0.060
Num eligible students (S)	1.01	0.00	11	2.43	0.034
Yr in need of improvement (S)	1.08	0.03	11	2.58	0.026
Num. ELL students (S)	1.00	0.00	11	0.28	0.784
Num. Special Education students (S)	1.00	0.00	11	0.22	0.827
Mean score of schools (S)	1.01	0.01	11	0.58	0.573
Males	1.05	0.07	627	0.65	0.514
Eligible free/reduced lunch	1.16	0.08	627	1.78	0.075
English Language Learners	0.74	0.14	627	-2.12	0.034
Special Education students	0.95	0.05	627	-0.90	0.371
Rec'd supplemental reading instruct	0.75	0.13	627	-2.30	0.022
African-American	1.05	0.11	627	0.41	0.680

Grade 8	1.15	0.06	627	2.17	0.030
Baseline NJ score	0.90	0.05	627	-2.00	0.045

Table 146. Attendance – Female

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	19.80	0.05	10	64.07	0.000
Treatment (S)	1.31	0.08	10	3.37	0.008
Num eligible students (S)	1.01	0.00	10	8.15	0.000
Yr in need of improvement (S)	1.01	0.02	10	0.33	0.747
Num. ELL students (S)	1.00	0.00	10	-1.23	0.249
Num. Special Education students (S)	1.00	0.00	10	-1.78	0.105
Mean score of schools (S)	0.98	0.01	10	-3.01	0.014
Eligible free/reduced lunch	1.39	0.10	296	3.47	0.001
English Language Learners	0.74	0.18	296	-1.66	0.098
Special Education student	0.99	0.09	296	-0.12	0.909
Rec'd supplemental reading instruct	0.54	0.31	296	-1.94	0.053
African-American	0.98	0.14	296	-0.12	0.905
Grade 8	1.16	0.08	296	1.86	0.063
Baseline NJ score	0.97	0.03	296	-1.00	0.319

Table 147. Attendance – Male

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.75	0.04	11	71.97	0.000
Treatment (S)	1.08	0.10	11	0.72	0.485
Num eligible students (S)	1.00	0.00	11	0.82	0.429
Yr in need of improvement (S)	1.10	0.04	11	2.52	0.029
Num. ELL students (S)	1.01	0.00	11	1.14	0.278
Num. Special Education students (S)	1.00	0.00	11	0.52	0.612
Mean score of schools (S)	1.00	0.01	11	0.27	0.791
Eligible free/reduced lunch	1.04	0.13	318	0.28	0.782
English Language Learners	0.79	0.14	318	-1.69	0.092
Special Education student	0.93	0.11	318	-0.68	0.498
Rec'd supplemental reading instruct	0.96	0.26	318	-0.17	0.864
African-American	1.11	0.12	318	0.88	0.381
Grade 8	1.10	0.11	318	0.92	0.360
Baseline NJ score	0.84	0.08	318	-2.19	0.029

Table 148. Attendance – African-American

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.01	0.07	11	48.13	0.000
Treatment (S)	1.12	0.08	11	1.39	0.191
Num eligible students (S)	1.01	0.00	11	3.77	0.004
Yr in need of improvement (S)	1.02	0.03	11	0.74	0.476
Num. ELL students (S)	1.00	0.00	11	-0.26	0.802
Num. Special Education students (S)	0.99	0.00	11	-2.34	0.039
Mean score of schools (S)	0.98	0.01	11	-2.18	0.052
Males	1.09	0.10	362	0.86	0.390
Eligible free/reduced lunch	1.06	0.08	362	0.75	0.454
English Language Learners	0.74	0.25	362	-1.20	0.232
Special Education student	0.98	0.09	362	-0.27	0.789
Rec'd supplemental reading instruct	0.75	0.15	362	-1.92	0.056
Grade 8	1.02	0.10	362	0.21	0.838
Baseline NJ score	0.90	0.04	362	-2.47	0.014

Table 149. Attendance – Hispanic

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	24.68	0.22	7	14.65	0.000
Treatment (S)	1.21	0.35	7	0.55	0.600
Num eligible students (S)	1.00	0.01	7	0.12	0.910
Yr in need of improvement (S)	1.20	0.11	7	1.75	0.122
Num. ELL students (S)	0.99	0.01	7	-0.65	0.536
Num. Special Education students (S)	1.02	0.02	7	0.97	0.366
Mean score of schools (S)	1.01	0.02	7	0.41	0.695
Males	0.96	0.02	242	-1.61	0.109
Eligible free/reduced lunch	1.28	0.04	242	5.69	0.000
English Language Learners	0.68	0.04	242	-9.45	0.000
Special Education student	0.89	0.03	242	-4.29	0.000
Rec'd supplemental reading instruct	0.53	0.12	242	-5.25	0.000
Grade 8	1.29	0.02	242	11.09	0.000
Baseline NJ score	0.93	0.01	242	-5.98	0.000

Table 150. Attendance – Special Education

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	26.67	0.11	10	30.54	0.000
Treatment (S)	1.10	0.15	10	0.66	0.525
Num eligible students (S)	1.01	0.00	10	2.81	0.019
Yr in need of improvement (S)	1.05	0.04	10	1.19	0.261
Num. ELL students (S)	1.00	0.01	10	-0.64	0.534
Num. Special Education students (S)	0.99	0.01	10	-1.79	0.104
Mean score of schools (S)	1.00	0.01	10	-0.45	0.663
Males	1.05	0.13	247	0.35	0.725
Eligible free/reduced lunch	1.36	0.15	247	2.07	0.039
English Language Learners	0.70	0.38	247	-0.92	0.360
Rec'd supplemental reading instruct	0.56	0.47	247	-1.24	0.215
African-American	1.08	0.14	247	0.58	0.565
Grade 8	1.19	0.16	247	1.09	0.277
Baseline NJ score	0.92	0.09	247	-0.85	0.396

C26. NJASK LAL Analysis Group 1, 2, & 3

Table 151. NJASK -- Analysis Group 1 – Year 1 6-8th Grades and Year 2 6th Grade combined

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	165.15	4.50	12	36.68	0.000
Treatment (S)	2.70	1.91	12	1.41	0.183
Num eligible students (S)	-0.04	0.05	12	-0.90	0.385
Yr in need of improvement (S)	-0.93	0.58	12	-1.59	0.137
Num. ELL students (S)	-0.02	0.07	12	-0.31	0.760
Num. Special Education students (S)	0.11	0.09	12	1.35	0.202
Mean score of schools (S)	0.42	0.18	12	2.40	0.034
Males	-1.43	1.08	1184	-1.33	0.184
Limited English proficient	-4.19	2.16	1184	-1.94	0.052
Special Education student	-11.27	1.21	1184	-9.34	0.000
Rec'd supplemental reading instruct	-1.11	2.81	1184	-0.39	0.694
African-American	-0.86	1.34	1184	-0.64	0.521
Grade 6	-8.60	1.29	1184	-6.64	0.000
Grade 7	20.68	1.54	1184	13.43	0.000
Grade 8	-11.53	18.41	1184	-0.63	0.531
Baseline NJ score	0.43	0.05	1184	9.55	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	2.46		0.018	
Level-1 Residual	Student	18.21			

Table 152. NJASK – Analysis Group 2 – Year 1 6th Grade and Year 2 6th Grade combined

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	163.97	1.89	12	86.59	0.000
Treatment (S)	0.51	2.81	12	0.18	0.861
Num eligible students (S)	0.03	0.08	12	0.39	0.706
Yr in need of improvement (S)	-1.84	0.76	12	-2.43	0.032
Num. ELL students (S)	-0.05	0.09	12	-0.55	0.592
Num. Special Education students (S)	0.00	0.12	12	-0.01	0.993
Mean score of schools (S)	0.31	0.45	12	0.70	0.497
Males	-0.63	0.87	799	-0.73	0.467
Limited English proficient	-2.08	2.07	799	-1.00	0.317
Special Education student	-10.26	1.68	799	-6.10	0.000
Rec'd supplemental reading instruct	-3.17	2.19	799	-1.45	0.148
African-American	1.05	1.72	799	0.61	0.543
Grade 6	8.59	1.77	799	4.85	0.000
Baseline NJ score	0.59	0.08	799	7.51	0.000
Random Effects					
Variance Components		**Estimate**		**ICC**	
Level-2 Random Intercept	School	5.43		0.078	
Level-1 Residual	Student	18.74			

Table 153. NJASK -- Analysis Group 3 – Year 2 7th Grade

Fixed Effects					
	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept	169.80	1.67	12	101.81	0.000
Treatment (S)	-0.69	2.65	12	-0.26	0.798
Num eligible students (S)	0.02	0.07	12	0.31	0.762
Yr in need of improvement (S)	-1.55	0.88	12	-1.76	0.103
Num. ELL students (S)	0.20	0.08	12	2.34	0.037
Num. Special Education students (S)	-0.09	0.13	12	-0.74	0.472
Mean score of schools (S)	-0.85	0.39	12	-2.16	0.051
Males	-2.37	1.29	421	-1.83	0.067
Limited English proficient	0.31	3.19	421	0.10	0.924
Special Education student	-12.75	2.33	421	-5.47	0.000
Rec'd supplemental reading instruct	-8.90	2.86	421	-3.11	0.002
African-American	1.11	1.85	421	0.60	0.547
Baseline NJ score	0.54	0.08	421	6.57	0.000

Random Effects			
Variance Components		Estimate	ICC
Level-2 Random Intercept	School	5.59	0.093
Level-1 Residual	Student	17.4	

C27. Standard deviations used in calculating effect sizes

Table 154. Summary of Standard Deviations

Analysis groups	Outcomes	Overall	Female	Male	African-American	Hispanic	Special Education
1	Attendance	22.29	22.29	22.29	22.29	22.29	22.29
	Vocabulary	32.08	32.08	32.08	32.08	32.08	32.08
	Comprehension	28.89	28.89	28.89	28.89	28.89	28.89
	Language Arts	27.32	27.32	27.32	27.32	27.32	27.32
2	Attendance	20.46	20.46	20.46	20.46	20.46	20.46
	Vocabulary	28.72	28.72	28.72	28.72	28.72	28.72
	Comprehension	25.60	25.60	25.60	25.60	25.60	25.60
	Language Arts	23.85	23.85	23.85	23.85	23.85	23.85
3	Attendance	21.50	21.50	21.50	21.50	21.50	21.50
	Vocabulary	25.90	25.90	25.90	25.90	25.90	25.90
	Comprehension	26.60	26.60	26.60	26.60	26.60	26.60
	Language Arts	27.41	27.41	27.41	27.41	27.41	27.41
4	Attendance	27.97	27.97	27.97	27.97	27.97	27.97
	Vocabulary	27.10	27.10	27.10	27.10	27.10	27.10
	Comprehension	23.71	23.71	23.71	23.71	23.71	23.71
	Language Arts	23.15	23.15	23.15	23.15	23.15	23.15
5	Attendance	24.85	24.85	24.85	24.85	24.85	24.85
	Vocabulary	28.31	28.31	28.31	28.31	28.31	28.31
	Comprehension	27.63	27.63	27.63	27.63	27.63	27.63
	Language Arts	26.35	26.35	26.35	26.35	26.35	26.35